Check Sheet

On Site Thermal Soil Remediation, Inc

Company Name:
Permit Number: AC43-189604
PSD Number:
Permit Engineer:

Cross References:
- ☐
- ☐
- ☐

Application:
- ☑ Initial Application
- ☑ Incompleteness Letters
- ☐ Responses
- ☐ Waiver of Department Action
- ☐ Department Response
- ☐ Other

Intent:
- ☑ Intent to Issue
- ☑ Notice of Intent to Issue
- ☑ Technical Evaluation
- ☒ BACT or LAER Determination
- ☑ Unsigned Permit
- Correspondence with:
  - ☐ EPA
  - ☐ Park Services
  - ☐ Other
- ☑ Proof of Publication
- ☐ Petitions - (Related to extensions, hearings, etc.)
- ☑ Waiver of Department Action
- ☐ Other

Final Determination:
- ☑ Final Determination
- ☑ Signed Permit
- ☒ BACT or LAER Determination
- ☐ Other

Post Permit Correspondence:
- ☐ Extensions/Amendments/Modifications
- ☐ Other

Revision #5

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Mr. William A. MacDonald, Pres
On Site Thermal Soil
Remediation, Inc
3450 SE Dixie Hwy
Stuart, Fl 34997

4a. Article Number
P 710 058 478

4b. Service Type
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
5-15-92 Ea

5. Signature (Addressee)

6. Signature (Agent)
Karen Nash

8. Addressee's Address (Only if requested and fee is paid)

PS Form **3811**, November 1990 ☆U.S. GPO: 1991—287-068 **DOMESTIC RETURN RECEIPT**

P 710 058 478

Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to	William MacDonald
Street & No.	On Site Thermal Soil
P.O., State & ZIP Code	Stuart, Fl 34997
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	$
Postmark or Date	5-13-92 AC43-189664

PS Form **3800**, June 1990

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

In the matter of an
Application for Permit by:

DER File No. AC 43-189664
St. Lucie County

Mr. William A. Macdonald, President
On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

/

Enclosed is Permit Number AC 43-189664 to construct a 25 TPH transportable soil thermal treatment facility in Stuart, St. Lucie County, Florida, issued pursuant to Section(s) 403, Florida Statutes. This permit authorizes operation in St. Lucie County only. Prior to operating in any other county, the public notice requirements must be completed and the permit amended.

You are also required to obtain a general permit from the Division of Waste Management prior to placing this facility in operation. Also be advised that the Division of Waste Management is in the process of revising F.A.C. Rule 17-775, Soil Thermal Treatment Facilities, and the Division of Air Resources Management is in the process of adopting specific regulation on soil thermal treatment facilities which, among other requirements, will require the installation of a continuous emissions monitor for carbon monoxide prior to September 1, 1992.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 5-13-92 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 5-13-92 (Date)

Copies furnished to:
Tom Canrardy, BWC
District Air Program Administrators
County Air Program Administrators
Albert Ugelow, P.E.

Final Determination

On Site Thermal Soil Remediation, Inc.
Stuart, Florida

25 TPH Transportable Soil Thermal Treatment Facility
St. Lucie County

Permit No.: AC 43-189664
Unit: 001-91

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

May 6, 1991

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a 25 TPH transportable soil thermal treatment facility (AC 43-189664) for On Site Thermal Soil Remediation, Inc. of Stuart, St. Lucie County, Florida, was distributed on April 5, 1991. The applicant requested and the Department allowed additional time for publication of the Notice of Intent to Issue this permit. The Notice of Intent to Issue was published in the Fort Pierce Port St. Lucie Tribune on April 6, 1992. The paper is circulated in St. Lucie County. Copies of the evaluation were available for public inspection at the Department's District and approved county air program offices.

No comments were submitted on the Department's Intent to Issue the permit. The final action of the Department will be to issue construction permit AC 43-189664 basically as proposed in the Technical Evaluation and Preliminary Determination, except for a revised expiration date.

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

Permit Number: AC 43-189664*
Expiration Date: May 1, 1993
County: Mobile Operation
Project: 25 TPH Transportable Soil Thermal Treatment Facility Unit No. 001-91

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to construct an ADM Mobile RS15 25 TPH soil remediation unit. The unit consists of a contaminated soil hopper, drum dryer with a 19 MMBtu/hr propane burner, a cyclone system, a baghouse, a 97.68% efficient (minimum) afterburner equipped with an 18 MMBtu/hr propane burner that is capable of operating above 1600°F with a 1 second residence time, and associated equipment. The unit is equipped with a stack (3 feet diameter by 22 feet long) that discharges approximately 31,000 acfm at 1600°F to the atmosphere.

*This permit is void if construction does not commence within 18 months of its issuance, if construction is discontinued for more than 18 months, or if construction is not completed and the plant placed in operation within a reasonable time.

The unit may be operated in all counties throughout Florida with the following restriction: Before this unit is operated in **any** county, the Department's public notice requirements must be met for that county and the unit's permit amended.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received Nov. 26, 1990.
2. DER letter dated Dec. 20, 1990.
3. On Site letter dated Jan. 23, 1991.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for

GENERAL CONDITIONS:

continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of this facility shall reasonably conform to the plans submitted in the application.

2. The stack sampling facilities must comply with F.A.C. Rule 17-2.700(4).

3. The afterburner shall be capable of operating above 1600°F with a 0.97 second retention time and have a minimum VOC destruction efficiency of 97.68%. A minimum afterburner temperature will be incorporated into any operating permit issued for this unit.

SPECIFIC CONDITIONS:

Emission Restrictions

4. Particulate matter emissions from the afterburner stack shall neither exceed 0.08 grains/dscf corrected to 50% excess air nor 6.1 lbs/hr. Visible emissions from any part of the process shall not exceed 5% opacity.

5. Benzene emissions from the afterburner stack shall not exceed 6.0 lbs/hr. Total VOC emissions shall not exceed 22.9 lbs/hr. Compliance shall be determined by a material balance using soil analysis, production rate, and the afterburner destruction efficiency.

6. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.

Operation Requirements

7. The system shall be properly operated and maintained (F.A.C. Rule 17-2.210(2)). No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly (F.A.C. Rule 17-2.240).

8. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation (F.A.C. Rule 17-2.610(3)). This includes keeping the work areas wet where the soil is being removed and treated.

9. The unit shall not be operated at a location or in a manner that may create a nuisance.

10. Untreated soil removed from the ground shall be stored under waterproof covers and on an impermeable surface.

11. This unit shall be allowed to operate 24 hours per day, 7 days per week, but not more than 7,400 hours per year.

12. Maximum soil charging rate to the unit shall not exceed 25 TPH. The soil entering the kiln cannot be larger than 2 inches in diameter. The permittee shall have means to determine the feed or production rate on site.

SPECIFIC CONDITIONS:

13. Only natural gas or LPG shall be used as fuel for the kiln and afterburner. Maximum permitted fuel consumption is 36.9 MMBtu/hr (35,000 CFH natural gas or 407 GPH propane).

14. Only soils contaminated with gasoline, No. 2 type oils, and motor oils shall be treated in this unit unless otherwise approved by the Bureau of Air Regulation.

Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

Metals in the untreated soil shall not exceed the following:

Metals	Maximum Concentration TCLP(mg/L)	Total(mg/Kg)
Arsenic	5.0	55
Barium	100.0	2750
Cadmium	1.0	55
Chromium	5.0	275
Lead	5.0	77
Mercury	0.2	17
Selenium	1.0	165
Silver	5.0	165

Total Volatile Organic Aromatics (VOA) constituent in the soil shall not exceed the concentrations that have the potential to exceed the acceptable ambient air concentration or the VOC emission limit for this unit (see Specific Conditions Nos. 5, 17, and 27).

To show compliance with this condition, the permittee shall analyze composite samples of the contaminated soil (see Specific Condition No. 16) by the EPA SW 846 Methods, Test Method for Evaluating Solid Waste Physical/Chemical, for VOA (EPA Method 5030/8020), TRPH (EPA draft Method 9073), and Metals (EPA Method 1311, 3050, 6010, 7040, 7041, 7060, 7061, 7080, 7130, 7131, 7190, 7191, 7420, 7421, 7471, and 7760).

15. The permittee may request, in writing, permission to treat "off-spec" material. The request shall include the history of the site to be treated, an analysis of the contaminants suspected to be in the soil, an estimate of the emissions from the unit while processing the soil, and calculations showing that the ambient air

SPECIFIC CONDITIONS:

impact from the unit will not exceed the acceptable ambient air concentration for any toxic pollutant. The Department will approve or deny each request in writing, after a public notice for the specific project, on a case-by-case basis.

16. Sampling and analysis of the contaminated soil at each site, based on the procedures prescribed in SW-846, shall be conducted prior to remediation. Minimum number of composite samples for analysis at each site prior to remediation shall be as follows:

Soil Quantity ($yards^3$)	No. of Composite Samples
Less than 100	1
100 to 500	3
500 to 1000	5
Each additional 250 yds	1 additional sample

17. Unless the Department has determined other concentrations are required to protect public health and safety, predicted ambient air impact of any toxic pollutant, as determined by the PTPLU 6 model or other DARM approved models, shall not exceed the concentration calculated by the following formula:

$$AAC = \frac{40}{X} \cdot \frac{1}{\text{safety factor}} \cdot (OEL)$$

where,

AAC = acceptable ambient concentration

Safety Factor = 100 for category A substances and
50 for category B substances

X = 40 or the hours/week of actual operation, whichever is larger

OEL - Occupational exposure level such as the TWA-TLV published by the ACGIH, OSHA, and NIOSH published standards for toxic materials.

TWA-TLV is the threshold limit value (8 hrs/day, 40 hrs/wk) maximum exposure concentration considered safe for workers by the ACGIH.

SPECIFIC CONDITIONS:

Data in the application shows that, for continuous operation, an emission of 1 gram/sec will have a maximum ambient impact of 9.4×10^{-3} mg/m^3 (8 hr. avg). If the stack parameters are different than the values listed in the application, the permittee must determine and use the actual impact factor calculated by the EPA Approved Screen - 1.1 Model.

$$\text{Maximum Allowable Emissions (g/sec)} = \frac{\text{AAC } mg/m^3}{9.4 \times 10^{-3}}$$

18. Pressure drop across the baghouse shall be recorded hourly and temperature of the afterburner shall be recorded continuously during operations. The instruments used to obtain these measurements shall be properly calibrated, maintained, and in operation any time the unit is in service.

Compliance Requirements

19. This unit shall be tested at a process weight rate of 22.5 to 25 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700. The unit shall not operate above the maximum permitted rate of 25 TPH.

20. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Chapter 17-2, F.A.C., or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

21. The exhaust stack for this process must be tested concurrently for particulate matter and visible emissions by EPA Methods 5 and 9 pursuant to 40 CFR 60, Appendix A, revised as of July 1, 1991, within 5 days after placing the unit in commercial operation under this permit and annually thereafter. Operation at each subsequent site requires an EPA Method 9 test to be performed within 3 days of placing the unit in service.

22. The unit destruction efficiency, benzene, and VOC emissions shall be established by a material balance using a Method 18, or 25 test (40 CFR 60, Appendix A, revised as of July 1, 1991) and soil analysis before and after treatment or other methods as approved by the Department.

SPECIFIC CONDITIONS:

Administrative Requirements

23. The permittee shall furnish the available information listed in Specific Condition No. 24 prior to operating the portable rotary kiln/afterburner system at its initial site. This permit requires compliance with any applicable local (county) regulations.

24. This unit shall not be operated at any new site until the permittee has requested authorization to operate at the new site. The permittee shall notify the BAR, local government (city and/or county), and Department District office by registered mail at least 3 days prior to moving to the new site. The notification shall provide the permit number of the unit, a copy of the last stack test results, the date of the proposed move, the new site for the unit, and the locations and contamination levels of the soils to be treated. The Department shall notify the permittee of any new air pollutant emission conditions the unit must meet within 3 days of the receipt of the relocation notice. This may include requirements for county operation permits and additional restrictions on the operation of this unit.

25. The permittee shall maintain a log that shows the unit's operation time during the preceeding 12 months. All required records must be available for inspection at the job site for the unit within 3 working days of a request by the Department.

26. The BAR shall be notified in writing at least 15 days in advance of any annual compliance test to be conducted on this source.

27. Any analysis required by Specific Condition No. 16 which indicates a violation of any condition in this permit shall be reported as soon as feasible to BAR. An average concentration of benzene above 5,180 ppm in the soil or total hydrocarbons above 19,740 ppm indicate a violation of this permit. The soil may be decontaminated by operating at less than the 25 TPH production rate, or other means, with prior approval of the Department. The permittee must propose the method of compliance with this permit.

28. Records shall be kept on the location, date, time, and number of samples taken for each composite sample. Soil analysis results shall be available for Department inspection during the clean up of the site and for 3 years thereafter. All soil samples taken at the remediation site and exiting the dryer shall be stored in a sealed glass container immediately upon sampling.

PERMITTEE:
On Site Thermal Soil
Remediation, Inc.

Permit Numbers: AC 43-189664
Expiration Date: May 1, 1993

SPECIFIC CONDITIONS:

29. Stack test results from PM and VOC shall be submitted to the Department within 45 days of the test.

30. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAR prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

31. An application for an operation permit must be submitted to the BAR at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this 12th day
of May, 1992

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner, Secretary

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

TO: Carol M. Browner

FROM: Steve Smallwood for

DATE: May 6, 1992

SUBJ: Approval of Construction Permit AC AC 43-189664
On Site Thermal Soil Remediation, Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a 25 TPH transportable soil thermal treatment facility. The unit is capable of complying with the proposed amendment to Chapter 17-2, Air Pollution, that will incorporate regulations for soil thermal treatment facilities.

No comments were received during the public notice period.

I recommend your approval and signature.

CF/WH/plm

Attachments

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

APRIL 13, 1992

WILLARD HANKS
DEPT. OF ENVIRONMENTAL REG.
2600 BLAIR STONE RD.
TALLAHASSEE, FL 32399-2400

RE: DER FILE NO. AC-43-189664, 15 TPH SRU

Dear Mr. Hanks

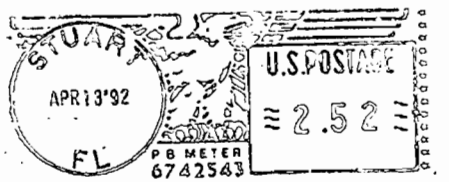
Attached is a copy of our legal notice published on April 6,1992 in St.Lucie County. This was done in response to a March 16,1992 letter from C.Fancy, requiring this action in order to protect our permit.

Sincerly,

B. Macdonald

Bill Macdonald

ON-SITE THERMAL
3450 S.E.DIXIE HWY
STUART,FL 34997



RECEIVED
APR 15 1992
Division of Air
Resources Management

MR. WILLARD HANKS
DEPT. OF ENVIRONMENTAL REG
2600 BLAIR STONE RD
TALLAHASSEE,FL 32399-2400

Fold at line over top of envelope to the right of the return address.

CERTIFIED

P 655 377 636

MAIL

Best Available Copy

FORT PIERCE PORT ST. LUCIE **Tribune**

P.O. Box 69
Fort Pierce, St. Lucie County, Florida 34954-0069

STATE OF FLORIDA
COUNTY OF ST. LUCIE

Before the undersigned authority personally appeared David T. Rutledge or Kathleen K. LeClair, who on oath says that he/she is publisher, business manager of The Tribune, a daily newspaper published at Fort Pierce in St. Lucie County, Florida; that the attached copy of the advertisement, being a Notice of intent
in the matter of To issue Permit of Site Thermal Soil Remediation, Inc.
was published in said newspaper in the issues of April 6, 1992

Affiant further says that The Tribune is a newspaper published at Fort Pierce, in said St. Lucie County, Florida, and that the said newspaper has heretofore been continuously published in St. Lucie County, Florida, each day and has been entered as second class mail matter at the post office in Fort Pierce, in said St. Lucie County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement: and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me
This sixth day of April
A.D. 1992.
Julianne Seresac
Notary Public
State of Florida at Large
My Commission Expires
April 2, 1994
(SEAL) Notary Public

No. 06060
State of Florida
Department of
Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit, (AC 43-189664) to On Site Thermal Soil Remediation, Inc., 3450 S.E. Dixie Highway, Stuart, Florida 34997, to construct a 25 TPH mobile soil remediation unit with air pollution controlled by a baghouse and afterburner. The unit may operate in any county in Florida after completion of the public notice requirements for that county. The regulations do not require a Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) determination. The unit may emit 6.1 lbs/hr (22.6 TPY) particulate matter, 10.0 lbs/hr (37.0 TPY) sulfur dioxide, 22.9 lbs/hr (84.7 TPY) volatile organic compounds, 7.8 lbs/hr (28.9 TPY) nitrogen oxides, and 1.9 lbs/hr (7.0 TPY) carbon monoxide. These emissions will not cause a violation of any ambient air quality standard for Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends

which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, FL 32399-2400; 3319 Maguire Blvd., Suite 232, Orlando, FL 32803-3767; 160 Governmental Center, Pensacola, FL 32501-5794; 4520 Oak Fair Boulevard, Tampa, FL 33610-7347; 2269 Bay Street, Fort Myers, FL 33901-2896; 7825 Baymeadows Way, Suite B200, Jacksonville, FL 32256-7577; 1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406.

and County environmental offices located at:

621, South Andrews Avenue, Fort Lauderdale, FL 33310; 801 SW 3rd Avenue, 2nd Floor, Miami, FL 33130; 421 West Church Street, Suite 412, Jacksonville, FL 32202; 1410 North 21st Street, Tampa, FL 33605; 901 E. Evernia Street, West Palm Beach, FL 33402; 315 Court Street, Clearwater, FL 34616; 1301 Cattleman Road, Bldg. B, Sarasota, FL 43232-6299; 2002 E. Michigan Avenue, Orlando, FL 32806.

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

PUBLISH: April 6, 1992

FORT PIERCE PORT ST. LUCIE **Tribune**

P.O. Box 69
Fort Pierce, St. Lucie County, Florida 34954-0069

STATE OF FLORIDA
COUNTY OF ST. LUCIE

Before the undersigned authority personally appeared David T. Rutledge or Kathleen K. LeClair, who on oath says that he/she is publisher, business manager of The Tribune, a daily newspaper published at Fort Pierce in St. Lucie County, Florida; that the attached copy of the advertisement, being a Notice of Intent to Issue in the matter of Permit to On Site Thermal Soil Remediation, Inc. was published in said newspaper in the issues of April 6, 1992

Affiant further says that The Tribune is a newspaper published at Fort Pierce, in said St. Lucie County, Florida, and that the said newspaper has heretofore been continuously published in St. Lucie County, Florida, each day and has been entered as second class mail matter at the post office in Fort Pierce, in said St. Lucie County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement: and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me
This 6th day of April
A.D. 1992

Notary Public
State of Florida at Large
My Commission Expires
April 2, 1994

(SEAL) Notary Public

RECEIVED
APR 13 1992
Division of Air
Resources Management

No. 06060
State of Florida
Department of
Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (AC 43-189664) to On Site Thermal Soil Remediation, Inc., 3450 S.E. Dixie Highway, Stuart, Florida 34997, to construct a 25 TPH mobile soil remediation unit with air pollution controlled by a baghouse and afterburner. The unit may operate in any county in Florida after completion of the public notice requirements for that county. The regulations do not require a Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) determination. The unit may emit 6.1 lbs/hr (22.6 TPY) particulate matter, 10.0 lbs/hr (37.0 TPY) sulfur dioxide, 22.9 lbs/hr (84.7 TPY) volatile organic compounds, 7.8 lbs/hr (28.9 TPY) nitrogen oxides, and 1.9 lbs/hr (7.0 TPY) carbon monoxide. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a)The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b)A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c)A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d)A statement of the material facts disputed by Petitioner, if any;

(e)A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f)A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g)A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, FL 32399-2400; 3319 Maguire Blvd., Suite, 232, Orlando, FL 32803-3767; 160 Governmental Center, Pensacola, FL 32501-5794; 4520 Oak Fair Boulevard, Tampa, FL 33610-7347; 2269 Bay Street, Fort Myers, FL 33901-2896; 7825 Baymeadows Way, Suite B200, Jacksonville, FL 32256-7577; 1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406

and County environmental offices located at:

621 South Andrews Avenue, Fort Lauderdale, FL 33310; 801 SW 3rd Avenue, 2nd Floor, Miami, FL 33130; 421 West Church Street, Suite 412, Jacksonville, FL 32202; 1410 North 21st Street, Tampa, FL 33605; 901 E. Evernia Street, West Palm Beach, FL 33402; 315 Court Street, Clearwater, FL 34616; 1301 Cattleman Road, Bldg. B, Sarasota, FL 43232-6299; 2002 E. Michigan Avenue, Orlando, FL 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

PUBLISH: April 6, 1992

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt Fee will provide you the signature of the person delivered to and the date of delivery.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

William a. Macdonald, Pres.
On Site Thermal Soil Remed.
3450 SE Dixie Hwy
Stuart, Florida 34997

4a. Article Number
P617 884 157

4b. Service Type
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
3-27-92

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
Dee Cheralier

PS Form **3811**, November 1990 ☆U.S. GPO: 1991—287-066 **DOMESTIC RETURN RECEIPT**

P 617 884 157

Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to: William Macdonald	
Street & No. On Site Thermal Soil Rem.	
P.O., State & ZIP Code Stuart, Fl	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	$
Postmark or Date 3-19-92 AC 43-189664	

PS Form **3800**, June 1990

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

March 16, 1992

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. William A. Macdonald, President
On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

Dear Mr. Macdonald:

Re: File No. AC 43-189664, Soil Remediation Unit

The Technical Evaluation and Preliminary Determination for your proposed 25 TPH mobile soil remediation unit was mailed on April 5, 1991. The Intent to Issue stated that failure to publish the Notice of Intent to Issue is grounds for denial of the permit. The Department allowed you additional time to negotiate with a potential challenger of the permit. This extension of time has expired. As of this date, the Bureau has not received proof that the Notice of Intent to Issue has been published. Unless the Department is furnished proof of publication by April 30, 1992, the Bureau will recommend that the referenced permit be denied pursuant to F.A.C. Rule 17-103.150(6).

If you have any questions on this matter, please write to me or call Willard Hanks, review engineer, at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/WH/plm

I N T E R O F F I C E M E M O R A N D U M

Date: 10-Mar-1992 01:55pm EST
From: Patricia Comer (TAL)
COMER_P
Dept: Office General Counsel
Tel No: 904/488-9730

TO: Pat Manning (TAL) (MANNING_P)

Subject: McDonald/On Site Soil letter

Doug Beason sent your message to me because Martin County/Stuart is SE District. I am pretty confused. I can't find any OGC file on this, although your proposed letter says there is a case and a Request For Extension was made and granted. Do you have the OGC case number or a copy of the Order Granting Extension?
I also have some reservations about the language of your letter. Please call me.
Thanks.

(on-site)
Doug Beason is attorney -
Marjani, (his secretary)
thinks that Hernando County's
request for extension of time
has expired

Need list of permitted SRU's
for Carol Barthman

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

September 25, 1991

Mr. Willard Hanks
FDER/BAR
2600 Blairstone Rd.
Tallahassee, FL 32399-2400

Dear Mr. Hanks:

Per our conversation on the phone last week, I need more time to pursue negotiations with potential challengers to our permit from Duval Co. A 60 day extension is requested to resolve this prolonged problem.

Thank you for your cooperation in this matter.

Sincerely,

William Macdonald
President

Ref. File No. · AC43-189664

I N T E R O F F I C E M E M O R A N D U M

Date: 11-Jul-1991 12:33pm GMT
From: Iris Littleton
LITTLETON_I
Dept: Office General Counsel
Tel No: 904/488-9730

TO: DUANE REVELL (REVELL,DUANE)

CC: Janet Llewellyn (LLEWELLYN_J)
CC: Dottie Diltz (DILTZ_D)
CC: Pat Manning (MANNING_P)

Subject: New OGC Case Assignments

TO: Duane Revell

FROM: Iris - OGC - Tallahassee

Received 7/03/91 request for an Extension of Time from Hidden Harbor Association, Inc. concerning permit MA58-194549-3.

Received 7/05/91 request for an Administrative Hearing from Polk County concerning permit DO53-196413.

Received 7/05/91 request for an Extension of Time from Hernando County against intent to issue permit AC43-189664 to On-Site Thermal Soil Remediation Inc.

Received 7/08/91 request for an Administrative Hearing from DeSoto National Memorial against intent to issue dredge and fill permit 41-189498-3 to John W. Rynerson.

Received 7/10/91 request for an Administrative Hearing from Alligator Park concerning permit IO08-192433.

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

June 13,91

Mr.William Hanks
FDER/BAR
2600 Blairstone Rd.
Tallahassee,Fl.
32399-2400

Dear Mr. Hanks

Per our conversation on the phone last week, I need more time to pursue negotiations with potential challengers to our permit for a Mobil soil remediation unit. A 60 day extension is requested to resolve any petitions by August 15,1991.
Thanks for your cooperation in this matter.

Sincerely
William Macdonald
President

REF.FILE NO. AC43-189664

cc: Ward

COMMISSION
PHYLLIS BUSANSKY
JOE CHILLURA
PAM IORIO
SYLVIA KIMBELL
JAN KAMINIS PLATT
JAMES D. SELVEY
ED TURANCHIK

FAX (813) 272-5157

ENVIRONMENTAL PROTECTION COMMISSION
HILLSBOROUGH COUNTY

ROGER P. STEWART
EXECUTIVE DIRECTOR
ADMINISTRATIVE OFFICES
AND
WATER MANAGEMENT DIVISION
1900 - 9TH AVENUE
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

AIR MANAGEMENT DIVISION
TELEPHONE (813) 272-5530

WASTE MANAGEMENT DIVISION
TELEPHONE (813) 272-5788

ECOSYSTEMS MANAGEMENT DIVISION
TELEPHONE (813) 272-7104

June 3, 1991

Mr. Barry Andrews
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: AC43-189664, On-Site Thermal Soil Remediation, Inc.
Soil Remediation Unit

Dear Mr. Andrews:

I have reviewed the above permit. In my opinion it is a purposeful and functional permit.

Sincerely,

Bkalra

Ben Kalra
Air Permit Engineer

bm

cc: Willard Hanks, DER-Tallahassee

RECEIVED
JUN 0 6 1991
Division of Air
Resources Management

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

RECEIVED
APR 26 1991
DER - BAQM

April 23,91

Mr.Willard Hanks
FDER-BAR
2600 Blairstone Rd.
Tallahassee,Fl
32399-2400

Dear Mr.Hanks

In our conversation this morning, among other things I asked for an extension of the 30 day requirement to publish a legal ad for our permit. At that time you agreed to June 5,1991 as an acceptable date for completion of this requirement. If you concur no other correspondence is needed by us.

Thanks for your consideration.

Sincerely

William Macdonald
President

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

Mr. M. Christopher Bryant
Oertel, Hoffman, Fernandez & Cole
P. O. Box 6507
Tallahassee, FL 32314-6507

4. Article Number
P 407 852 644

Type of Service:
- ☐ Registered
- ☒ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ COD
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X Todd Seamon

7. Date of Delivery

TALLAHASSEE FL APR 12 1991

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Apr. 1989 ★U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 407 852 644

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Mr. M. Christopher Bryant	
Street and No. Oertel & Hoffman P. O. Box 6507	
P.O., State and ZIP Code Tallahassee, FL 32314-6507	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 4-9-91 Permit: AC 43-189664	

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (AC 43-189664) to On Site Thermal Soil Remediation, Inc., 3450 S.E. Dixie Highway, Stuart, Florida 34997, to construct a 25 TPH mobile soil remediation unit with air pollution controlled by a baghouse and afterburner. The unit may operate in any county in Florida after completion of the public notice requirements for that county. The regulations do not require a Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) determination. The unit may emit 6.1 lbs/hr (22.6 TPY) particulate matter, 10.0 lbs/hr (37.0 TPY) sulfur dioxide, 22.9 lbs/hr (84.7 TPY) volatile organic compounds, 7.8 lbs/hr (28.9 TPY) nitrogen oxides, and 1.9 lbs/hr (7.0 TPY) carbon monoxide. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, FL 32399-2400
3319 Maguire Blvd., Suite, 232, Orlando, FL 32803-3767
160 Governmental Center, Pensacola, FL 32501-5794
4520 Oak Fair Boulevard, Tampa, FL 33610-7347
2269 Bay Street, Fort Myers, FL 33901-2896
7825 Baymeadows Way, Suite B200, Jacksonville, FL 32256-7577
1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406

and County environmental offices located at:

621 South Andrews Avenue, Fort Lauderdale, FL 33310
801 S.W. 3rd Avenue, 2nd Floor, Miami, FL 33130
421 West Church Street, Suite 412, Jacksonville, FL 32202
1410 North 21st Street, Tampa, FL 33605
901 E. Evernia Street, West Palm Beach, FL 33402
315 Court Street, Clearwater, FL 34616
1301 Cattleman Road, Bldg. B, Sarasota, FL 43232-6299
2002 E. Michigan Avenue, Orlando, FL 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Mr. William A. MacDonald
On Site Thermal Soil Remediation, Inc
3450 SE Dixie Hwy
Stuart, Fl 34997

4. Article Number
P 407 852 659

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X

7. Date of Delivery 4/9

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Apr. 1989 ★U.S.G.P.O. 1989-238-815 **DOMESTIC RETURN RECEIPT**

P 407 852 659

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to William MacDonald
Street and No. On Site Therm. Soil Rem.
P.O., State and ZIP Code Stuart, Fl 34997

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date 4-5-91 AC 43-189664	

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

File Copy

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 5, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. William A. Macdonald, President
On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

Dear Mr. Macdonald:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to construct a 25 TPH mobile soil remediation unit.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

Barry D. Andrews

for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/WH/plm

Attachments

c: Don Ehlenbeck, BWC
District Air Program Administrators
County Air Programs
Albert Ugelow, P.E.
Reading File
Willard Hanks } 4-5-91

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

On Site Thermal Soil Remediation, Inc. DER File No. AC 43-189664
3450 S.E. Dixie Highway
Stuart, Florida 34997

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue an air construction permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, On Site Thermal Soil Remediation, Inc., applied on November 26, 1990, to the Department of Environmental Regulation for a permit to construct a 25 TPH mobile soil remediation unit for operation throughout Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under

Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for Danny D. Shaw

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

Copies furnished to:

Don Ehlenbeck, BWC
District Air Program Administrators
County Air Programs
Albert Ugelow, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 4-5-91.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(9), Florida Statuts, with the designated Department Clerk, receipt of which is hereby acknowledged.

Martha J. Wise 4-5-91
Clerk Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (AC 43-189664) to On Site Thermal Soil Remediation, Inc., 3450 S.E. Dixie Highway, Stuart, Florida 34997, to construct a 25 TPH mobile soil remediation unit with air pollution controlled by a baghouse and afterburner. The unit may operate in any county in Florida after completion of the public notice requirements for that county. The regulations do not require a Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) determination. The unit may emit 6.1 lbs/hr (22.6 TPY) particulate matter, 10.0 lbs/hr (37.0 TPY) sulfur dioxide, 22.9 lbs/hr (84.7 TPY) volatile organic compounds, 7.8 lbs/hr (28.9 TPY) nitrogen oxides, and 1.9 lbs/hr (7.0 TPY) carbon monoxide. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment or create a health hazard. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applications have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The applications are available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, FL 32399-2400
3319 Maguire Blvd., Suite, 232, Orlando, FL 32803-3767
160 Governmental Center, Pensacola, FL 32501-5794
4520 Oak Fair Boulevard, Tampa, FL 33610-7347
2269 Bay Street, Fort Myers, FL 33901-2896
7825 Baymeadows Way, Suite B200, Jacksonville, FL 32256-7577
1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406

and County environmental offices located at:

621 South Andrews Avenue, Fort Lauderdale, FL 33310
801 S.W. 3rd Avenue, 2nd Floor, Miami, FL 33130
421 West Church Street, Suite 412, Jacksonville, FL 32202
1410 North 21st Street, Tampa, FL 33605
901 E. Evernia Street, West Palm Beach, FL 33402
315 Court Street, Clearwater, FL 34616
1301 Cattleman Road, Bldg. B, Sarasota, FL 43232-6299
2002 E. Michigan Avenue, Orlando, FL 32806

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

On Site Thermal Soil Remediation, Inc.
Stuart, Florida

25 TPH Mobile Soil Remediation Unit
Statewide Operation

File No.: AC 43-189664
Unit: 001-91

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

April 5, 1991

I. General Information

A. Applicant

On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

B. Request

On November 26, 1990, On Site Thermal Soil Remediation, Inc. submitted an application for a permit to construct a 25 TPH mobile soil remediation unit (rotary kiln with a baghouse and afterburner) which would be operated within the State. The application was considered complete on receipt (February 4, 1991) of their January 23, 1991, letter.

C. Project

The applicant is requesting permission to construct a 25 TPH mobile soil remediation unit (SIC 1629) for operation throughout the State. The unit will contain a soil hopper, 19 MMBtu/hr rotary kiln, cyclone, baghouse, 18 MMBtu/hr afterburner, propane fuel system, and associated equipment. The unit is to be used to decontaminate soils containing virgin petroleum products, gasoline, No. 2 oil type fuels, and "on-spec" motor oils.

D. Emissions

The unit will emit particulate matter (PM), including lead compounds, volatile organic compounds (VOC), and the products of combustion (SO_2, NO_X, and CO).

A 99.7% efficient ADM baghouse will be used to control PM emissions. The baghouse will meet the particulate matter emissions standard of 0.08 grain/dscf corrected to 50% excess air (F.A.C. Rule 17-2.600(1)(c)1.) that the Department will impose on this unit. Approximately 7,975 dscfm flow through the baghouse and afterburner resulting in an estimated PM emission of up to 6.1 lbs/hr. As the unit may operate 7,400 hours per year, the potential PM emissions will be 22.6 TPY.

The VOC evaporates from the contaminated soil in the kiln and passes through the cyclone and baghouse to the afterburner. The applicant estimates that up to 986.4 lbs/hr of VOC will enter the afterburner and, after 97.68% destruction, 22.9 lbs/hr of VOC will be discharged to the atmosphere. Based on 7,400 hours per year operation, this is equivalent to 85 TPY VOC emissions.

Natural gas and propane are the primary fuels. The maximum heat input to the rotary kiln/afterburner system is 37 MMBtu/hr (35,000 CFH natural gas or 407 GPH propane). Maximum emissions

from this fuel and the hydrocarbons destroyed in the afterburner are estimated to be 10.0 lbs/hr (37.0 TPY) SO_2, 7.8 lbs/hr (28.9 TPY) NOx, and 1.9 lbs/hr (7.0 TPY) CO.

Reasonable precautions will be required to control the unconfined emissions from decontaminated soil. This will involve wetting the dried material, covering storage piles, and hauling of the material in covered trucks.

At the low emission rates proposed, there should be no visible emissions from this source.

II. Rule Applicability

The proposed project, construction and operation of a 25 TPH portable rotary kiln/afterburner system, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code.

The source may be operated in areas designated nonattainment for particulate matter, ozone, and sulfur dioxide (F.A.C. Rule 17-2.410), unclassifiable for particulate matter and sulfur dioxide (F.A.C. Rule 17-2.430), attainment for all criteria pollutants (F.A.C. Rule 17-2.420), and maintenance for ozone (F.A.C. Rule 17-2.460).

The unit is a minor source (F.A.C Rule 17-2.100) because emissions of any single pollutant are less than 100 TPY. The proposed source is not subject to the preconstruction review requirements of F.A.C. Rule 17-2.500(5) and F.A.C. Rule 17-2.510(4) because permit restrictions will prohibit the unit from emitting 100 TPY of any pollutant. Should the unit violate this restriction, it could become retroactively subject to other regulations.

The source is subject to F.A.C. Rule 17-2.520, which pertains to sources not subject to PSD or nonattainment review. The unit is classified as an incinerator. Allowable particulate matter emissions are limited to 0.08 grains/dscf corrected to 50% excess air (F.A.C. Rule 17-2.600(1)(c)1.) and the emissions cannot cause objectionable odors (F.A.C. Rule 17-2.600(1)(c)2.). Chapter 17-2, F.A.C., does not have an applicable RACT standard for particulate matter, sulfur dioxide or volatile organic compounds (VOC) that would apply to this source. Organic (VOC) emissions will be regulated under F.A.C. Rule 17-2.620, General Pollutant Emission Limiting Standards, which restricts emissions to control by systems deemed necessary by the Department. The Department deems 95% destruction of the VOC air pollutants as a minimum standard for this unit. The discharge of pollutants shall not cause an objectionable odor or an exceedance of an acceptable ambient air concentration (AAC) or risk for toxic pollutants.

Prior to issuance of the proposed construction permit, the applicant must provide the Department's Bureau of Air Regulation with a list of all counties that the soil dryer will be operated in and certified proof of publication of the Notice of Intent from a newspaper of general circulation in each county on the list (F.A.C. Rule 17-2.220).

III. Technical Evaluation

This unit is restricted to processing soils contaminated with only virgin petroleum products (fuels and lubricants) and "on-spec" used oils (motor oils) unless prior approval is obtained to treat other material. It cannot be authorized to treat hazardous material as defined in 40 CFR 261.3 (revised as of July 1, 1988) nor materials that are corrosive, reactive, EP toxic or ignitable.

Chapter 17-775, F.A.C., Soil Thermal Treatment Facilities, regulates some aspects pertaining to the operation of this source. Some of these requirements are incorporated in the air permit. They include soil sampling specifications and pretreatment soil analysis. Also, requirements that the soil be stored on an impermeable surface or liner (to prevent contamination of other soils or water) and covered with a secured plastic cover until treatment (to minimize fugitive emissions) is included in the proposed permit.

Up to 25 TPH contaminated soil must be reduced to clumps that are a maximum of 2 inches in diameter prior to being fed into the kiln. The soil is heated to 400-700°F in the kiln to evaporate the petroleum products. These vapors flow through a 99+% efficient baghouse, which removes the particulate matter, and into the proposed 97.68% (minimum) destruction efficiency afterburner to burn the petroleum vapors. The afterburner has a minimum temperature of 1600°F and a minimum residence time of 0.97 seconds. Higher temperatures and/or residence time may be needed to achieve this destruction efficiency. The minimum allowable afterburner temperature will be based on the compliance test results and included in any permit to operate issued for this source.

At an allowable particulate matter standard of 0.08 gr/dscf corrected to 50% excess air (EA), the unit is allowed to emit 6.1 lbs/hr. The proposed permits will limit particulate matter emissions to this value.

With 25 TPH of soil containing 2.0% hydrocarbons being processed, the VOC emissions from the 97.68% efficient afterburner are estimated to be 22.89 lbs/hr. At 95% destruction efficiency (BAR policy) this unit would be a major source of VOC.

The guidance used by the Department to determine acceptable ambient concentrations (AAC) of hazardous pollutants is based on the following formula:

$$\text{Acceptable Ambient Concentration (AAC)} = \frac{40}{\text{(hrs per week operation)}} \times \frac{1 \times \text{(OEL)}}{\text{Safety factor}}$$

The safety factors are 100 for category A substances and 50 for category B substances.

OEL - Occupational Exposure Level such as ACGIH, OSHA, and NIOSH published standards for toxic materials.

TWA-TLV values are published by the American Conference of Governmental Industrial Hygienists (ACGIH). The values for the pollutants expected to be encountered in the proposed operation are as follows:

Pollutant	OEL mg/m^3	AAC (24 hr/day operation) mg/m^3
Benzene	3	0.0071
Toluene	375	1.786
Ethyl Benzene	435	1.036
Xylene	435	1.036

Calculations, using the EPA approved Screen - 1.1 Model (updated PTPLU 6 Model) and the stack parameters listed in the application, show that an emission rate of 1 gram/sec will have maximum ambient air impacts of 9.4×10^{-3} mg/m^3 (8 hr. avg.).

If the stack parameters change from 22 feet stack height, 3 feet stack diameter, 76 feet/second stack gas velocity, and 1600°F stack gas temperature, the impact of the emission will change. The model would need to be rerun with the correct parameters and the following calculations repeated.

The maximum emissions that can occur without exceeding the AAC can be determined by the following relationship:

AAC = Impact of Unit x Emissions.

With this relationship and data, the Department can estimate the maximum emissions of a pollutant from the proposed unit that can occur without exceeding the AAC. Also, by knowing the process weight for the unit (25 TPH), assuming all VOC in the contaminated soil is evaporated in the kiln, and that 97.68% of this VOC is destroyed by the afterburner, the maximum content of the pollutants in the soil that can exist without the potential to exceed the AAC can be determined. The Department has made these calculations for benzene. The results are summarized in the following table:

Pollutant	Maximum Emissions grams/second	lbs/hr	Maximum Soil Concentration PPM
Benzene	1.76	6.0	5,180

Using a similar procedure, it can be shown that the maximum VOC content of the untreated soil cannot exceed 19,740 PPM when the emissions from the afterburner are 22.89 lbs/hr VOC.

Because of the lower toxicity, the emissions of toluene, ethyl benzene, and xylene (commonly found in petroleum fuels) can be much higher than the benzene emissions without the unit's ambient air impact exceeding the AAC.

The Department has chosen to regulate benzene and total VOC only for soils contaminated with virgin petroleum products and "on-spec" used oil. For soil contaminated with other petroleum product components and derivatives, the applicant will be required to submit calculations showing the AAC or other concentrations required to protect public health and safety will not be exceeded before the Department will approve the treatment of this soil in the unit.

IV. Air Quality Analysis

By restricting the benzene and VOC content of the soil, the Department has reasonable assurance that the operation of the portable rotary kiln/afterburner system will not create a health hazard or cause/contribute to an ambient air quality violation.

V. Conclusion

Based on the information provided by On Site Thermal Soil Remediation, Inc., the Department has reasonable assurance that the proposed construction/operation of the 25 TPH mobile rotary kiln/afterburner system, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.

Barry D. Andrews
#36024
4-4-91

Using a similar procedure, it can be shown that the maximum VOC content of the untreated soil cannot exceed 19,740 PPM when the emissions from the afterburner are 22.89 lbs/hr VOC.

Because of the lower toxicity, the emissions of toluene, ethyl benzene, and xylene (commonly found in petroleum fuels) can be much higher than the benzene emissions without the unit's ambient air impact exceeding the AAC.

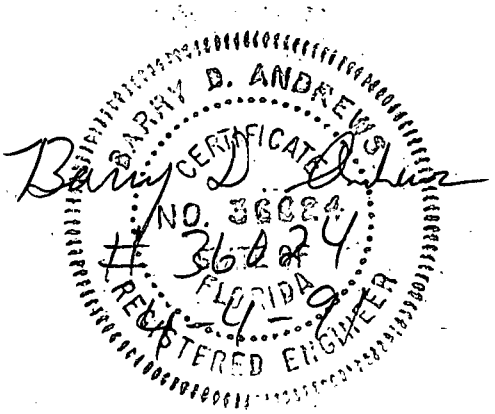
The Department has chosen to regulate benzene and total VOC only for soils contaminated with virgin petroleum products and "on-spec" used oil. For soil contaminated with other petroleum product components and derivatives, the applicant will be required to submit calculations showing the AAC or other concentrations required to protect public health and safety will not be exceeded before the Department will approve the treatment of this soil in the unit.

IV. Air Quality Analysis

By restricting the benzene and VOC content of the soil, the Department has reasonable assurance that the operation of the portable rotary kiln/afterburner system will not create a health hazard or cause/contribute to an ambient air quality violation.

V. Conclusion

Based on the information provided by On Site Thermal Soil Remediation, Inc., the Department has reasonable assurance that the proposed construction/operation of the 25 TPH mobile rotary kiln/afterburner system, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

Permit Number: AC 43-189664
Expiration Date: April 1, 1992
County: Mobile Operation
Project: 25 TPH Mobile Soil Remediation Unit, No. 001-91

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Authorization to construct an ADM Mobile RS15 25 TPH soil remediation unit. The unit consists of a contaminated soil hopper, drum dryer with a 19 MMBtu/hr propane burner, a cyclone system, a baghouse, a 97.68% efficient (minimum) afterburner equipped with an 18 MMBtu/hr propane burner that is capable of operating above 1600°F with a 1 second residence time, and associated equipment. The unit is equipped with a stack (3 feet diameter by 22 feet long) that discharges approximately 31,000 acfm at 1600°F to the atmosphere.

The unit may be used throughout the State (all counties) after receiving Department authorization to operate at a new location.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Application received Nov. 26, 1990.
2. DER letter dated Dec. 20, 1990.
3. On Site letter dated Jan. 23, 1991.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

a. Have access to and copy any records that must be kept under the conditions of the permit;

b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for

GENERAL CONDITIONS:

continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Construction Requirements

1. The construction of this facility shall reasonably conform to the plans and schedule submitted in the application.

2. The stack sampling facilities must comply with F.A.C. Rule 17-2.700(4).

3. The afterburner shall be capable of operating above 1600°F with a 0.97 second retention time and have a minimum VOC destruction efficiency of 97.68%. A minimum afterburner operation temperature, based on the compliance tests data, will be incorporated into any permit to operate issued for this unit.

SPECIFIC CONDITIONS:

Emission Restrictions

4. Particulate matter emissions from the afterburner stack shall neither exceed 0.08 grains/dscf corrected to 50% excess air nor 6.1 lbs/hr. Visible emissions from any part of the process shall not exceed 5% opacity.

5. Benzene emissions from the afterburner stack shall not exceed 6.0 lbs/hr. Total VOC emissions shall not exceed 22.89 lbs/hr. Compliance shall be determined by a material balance using soil analysis, production rate, and the afterburner destruction efficiency.

6. The operation of this source shall not result in the emissions of air pollutants which cause or contribute to an objectionable odor pursuant to F.A.C. Rule 17-2.600(c)2.

Operation Requirements

7. The system shall be properly operated and maintained (F.A.C. Rule 17-2.210(2)). No person shall circumvent any pollution control device or allow the emissions of air pollutants without the applicable air pollution control device operating properly (F.A.C. Rule 17-2.240).

8. Reasonable precautions shall be used to minimize unconfined emissions of particulate matter generated by this operation (F.A.C. Rule 17-2.610(3)). This includes keeping the work areas wet where the soil is being removed and treated.

9. The unit shall not be operated at a location or in a manner that may create a nuisance.

10. Untreated soil removed from the ground shall be stored under waterproof covers and on an impermeable surface.

11. This unit shall be allowed to operate 24 hours per day, 7 days per week, but not more than 7,400 hours per year.

12. Maximum soil charging rate to the unit shall not exceed 25 TPH. The soil entering the kiln cannot be larger than 2 inches in diameter. The permittee shall have means to determine the feed or production rate on site.

SPECIFIC CONDITIONS:

13. Only natural gas or LPG shall be used as fuel for the kiln and afterburner. Maximum permitted fuel consumption is 36.9 MMBtu/hr (35,000 CFH natural gas or 407 GPH propane).

14. Only soils contaminated with gasoline, No. 2 type oils, and motor oils shall be treated in this unit unless otherwise approved by the Bureau of Air Regulation.

Hazardous waste as defined in 40 CFR 261.3 shall not be processed by this unit.

Metals in the untreated soil shall not exceed the following:

	Maximum Concentration	
Metals	TCLP(mg/L)	Total(mg/Kg)
Arsenic	5.0	55
Barium	100.0	2750
Cadmium	1.0	55
Chromium	5.0	275
Lead	5.0	77
Mercury	0.2	17
Selenium	1.0	165
Silver	5.0	165

Total Volatile Organic Aromatics (VOA) constituent in the soil shall not exceed the concentrations that have the potential to exceed the acceptable ambient air concentration or the VOC emission limit for this unit (see Specific Conditions Nos. 5, 17, and 27).

To show compliance with this condition, the permittee shall analyze composite samples of the contaminated soil (see Specific Condition No. 16) by the EPA SW 846 Methods, Test Method for Evaluating Solid Waste Physical/Chemical, for VOA (EPA Method 5030/8020), TRPH (EPA draft Method 9073), and Metals (EPA Method 1311, 3050, 6010, 7040, 7041, 7060, 7061, 7080, 7130, 7131, 7190, 7191, 7420, 7421, 7471, and 7760).

15. The permittee may request, in writing, permission to treat "off-spec" material. The request shall include the history of the site to be treated, an analysis of the contaminants suspected to be in the soil, an estimate of the emissions from the unit while processing the soil, and calculations showing that the ambient air

SPECIFIC CONDITIONS:

impact from the unit will not exceed the acceptable ambient air concentration for any toxic pollutant. The Department will approve or deny each request in writing, after a public notice for the specific project, on a case-by-case basis.

16. Sampling and analysis of the contaminated soil at each site, based on the procedures prescribed in SW-846, shall be conducted prior to remediation. Minimum number of composite samples for analysis at each site prior to remediation shall be as follows:

Soil Quantity ($yards^3$)	No. of Composite Samples
Less than 100	1
100 to 500	3
500 to 1000	5
Each additional 250 yds	1 additional sample

17. Unless the Department has determined other concentrations are required to protect public health and safety, predicted ambient air impact of any toxic pollutant, as determined by the PTPLU 6 model or other DARM approved models, shall not exceed the concentration calculated by the following formula:

$$AAC = \frac{40}{X} \cdot \frac{1}{\text{safety factor}} \cdot (OEL)$$

where,

AAC = acceptable ambient concentration

Safety Factor = 100 for category A substances and
50 for category B substances

X = 40 or the hours/week of actual operation, whichever is larger

OEL - Occupational exposure level such as the TWA-TLV published by the ACGIH, OSHA, and NIOSH published standards for toxic materials.

TWA-TLV is the threshold limit value (8 hrs/day, 40 hrs/wk) maximum exposure concentration considered safe for workers by the ACGIH.

SPECIFIC CONDITIONS:

Data in the application shows that, for continuous operation, an emission of 1 gram/sec will have a maximum ambient impact of 9.4×10^{-3} mg/m^3 (8 hr. avg). If the stack parameters are different than the values listed in the application, the permittee must determine and use the actual impact factor calculated by the EPA Approved Screen - 1.1 Model.

$$\text{Maximum Allowable Emissions (g/sec)} = \frac{\text{AAC} \quad mg/m^3}{9.4 \times 10^{-3}}$$

18. Pressure drop across the baghouse shall be recorded hourly and temperature of the afterburner shall be recorded continuously during operations. The instruments used to obtain these measurements shall be properly calibrated, maintained, and in operation any time the unit is in service.

Compliance Requirements

19. This unit shall be tested at a process weight rate of 22.5 to 25 TPH. All compliance tests shall meet the requirements listed in F.A.C. Rule 17-2.700. The unit shall not operate above the maximum permitted rate of 25 TPH.

20. When the Department, after investigation, has good reason (such as complaints, increased visible emissions, or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Chapter 17-2, F.A.C., or in this permit is being violated, it may require the owner or operator of the unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the Department.

21. The exhaust stack for this process must be tested concurrently for particulate matter and visible emissions by EPA Methods 5 and 9 pursuant to 40 CFR 60, Appendix A, revised as of July 1, 1988, within 5 days after placing the unit in commercial operation under this permit and annually thereafter. Operation at each subsequent site requires an EPA Method 9 test to be performed within 3 days of placing the unit in service.

22. The unit destruction efficiency, benzene, and VOC emissions shall be established by a material balance using a Method 18, or 25 test (40 CFR 60, Appendix A, revised as of July 1, 1988) and soil analysis before and after treatment or other methods as approved by the Department.

SPECIFIC CONDITIONS:

Administrative Requirements

23. The permittee shall furnish the available information listed in Specific Condition No. 24 prior to operating the portable rotary kiln/afterburner system at its initial site. This permit requires compliance with any applicable local (county) regulations.

24. This unit shall not be operated at any new site until the permittee has requested authorization to operate at the new site. The permittee shall notify the BAR, local government (city and/or county), and Department District office by registered mail at least 3 days prior to moving to the new site. The notification shall provide the permit number of the unit, a copy of the last stack test results, the date of the proposed move, the new site for the unit, and the locations and contamination levels of the soils to be treated. The Department shall notify the permittee of any new air pollutant emission conditions the unit must meet within 3 days of the receipt of the relocation notice. This may include requirements for county operation permits and additional restrictions on the operation of this unit.

25. The permittee shall maintain a log that shows the unit's operation time during the preceeding 12 months. All required records must be available for inspection at the job site for the unit within 3 working days of a request by the Department.

26. The BAR shall be notified in writing at least 15 days in advance of any annual compliance test to be conducted on this source.

27. Any analysis required by Specific Condition No. 16 which indicates a violation of any condition in this permit shall be reported as soon as feasible to BAR. An average concentration of benzene above 5,180 ppm in the soil or total hydrocarbons above 19,740 ppm indicate a violation of this permit. The soil may be decontaminated by operating at less than the 25 TPH production rate, or other means, with prior approval of the Department. The permittee must propose the method of compliance with this permit.

28. Records shall be kept on the location, date, time, and number of samples taken for each composite sample. Soil analysis results shall be available for Department inspection during the clean up of the site and for 3 years thereafter. All soil samples taken at the remediation site and exiting the dryer shall be stored in a sealed glass container immediately upon sampling.

SPECIFIC CONDITIONS:

29. Stack test results from PM and VOC shall be submitted to the Department within 45 days of the test.

30. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAR prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

31. An application for an operation permit must be submitted to the BAR at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

_____
Carol M. Browner, Secretary

Attachments Available Upon Request

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

January 23, 1991

Dept. of Environmental Reg.
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

Re: DER File No. AC-43-189664, 15 TPH SRU

Dear Mr. Hanks:

The information you have asked for in your preliminary review of our application for a permit to construct a 25 TPH Mobile soil remediation unit is itemized below in the same order as your letter followed.

1. I have reviewed our calculations to determine the maximum annual hours we can operate without exceeding the 100 TPY standard. Considering the fuel consumption of our generator and payloader by limiting operations to 24 hour/ day 365 days/year for a maximum of 7400 hours/year, total voc emissions should be < 90 TPY. The tractor will not be used on site therefore is of negligible concern.

2. Enclosed is the revised sketch showing the dimensions of the dryer and afterburner.
   A. Baghouse information: Model BH247-8
   247 bags - 4.5" dia - 96" Long - 14 oz./550° material = 2,432 sq. ft. of filter = 5.14:1 air to cloth ratio.

   B. Afterburner information:
   Area = 14.7 sq. ft. - Length = 34'
   31,000 ACFM ÷ (60 X 14.7) = 35.15 FPS
   Retention time at maximum operating conditions is .97 sec.

3. DSCFM corrected to 50% excess air: Total Fuel consumption (max.) = 36 MM BTU converted to CFH = 14,650 ft. 3 /hr air required with 50% excess air = 150% X 23.86 cu. ft. X 14,650 ft. 3 /hr = 524,332 cu. ft. air/hr = 8.738 SCFM.

4. Fugitive dust will be controlled by water injection into the processed (clean) soil conveyer.

ON SITE THERMAL SOIL REM.
3450 S.E. DIXIE HWY.
STUART FL. 34997

From | Mail Sta. – Plt. No. – Group No.

To: DEPT. OF ENVIRONMENTAL REG.
2600 BLAIR STONE Rd.
TALLAHASSEE FL.
32399-2400

ATT. MR. WILLARD HANKS - BAR

*GC 3294 REV. 3
4-86

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

5. This unit will not use fuel other than LPG or natural gas.

Attached is our published notice of application per your request. We hope the above information is sufficient for you to resume processing our application. If you have any other questions please call me at 220-3421 or write to the above address.

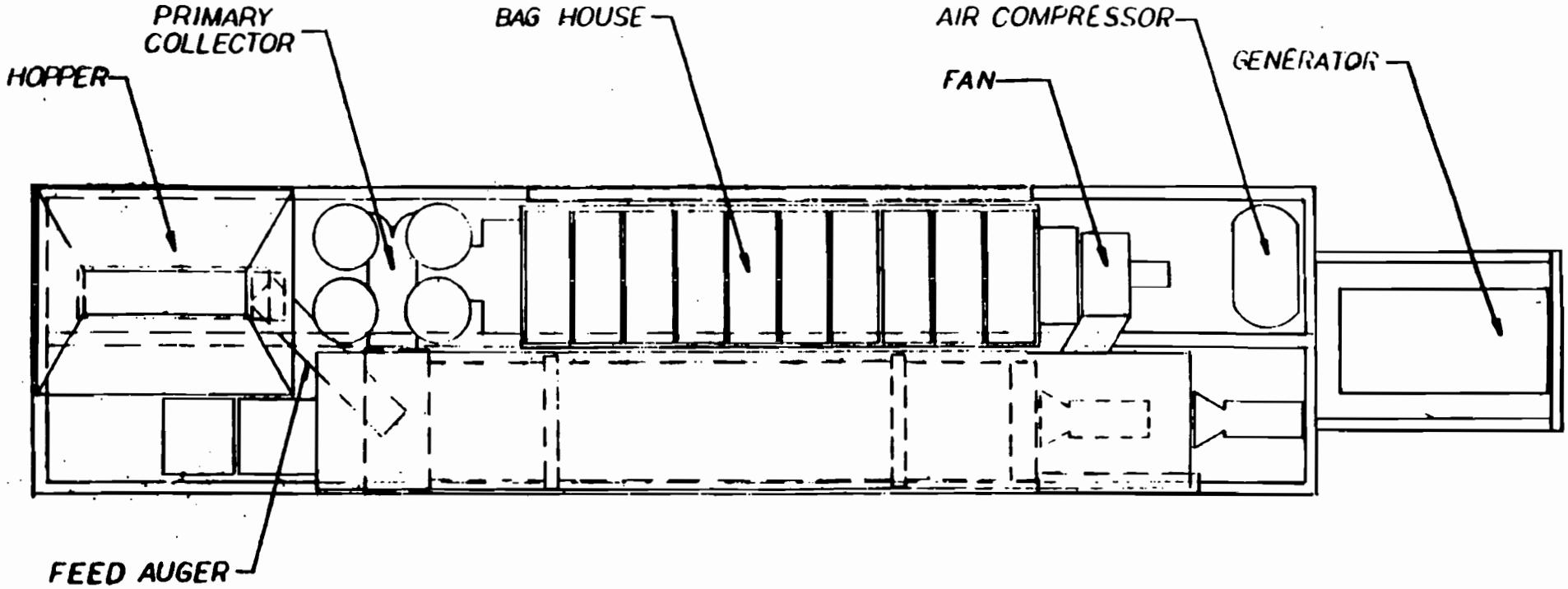
Sincerely,

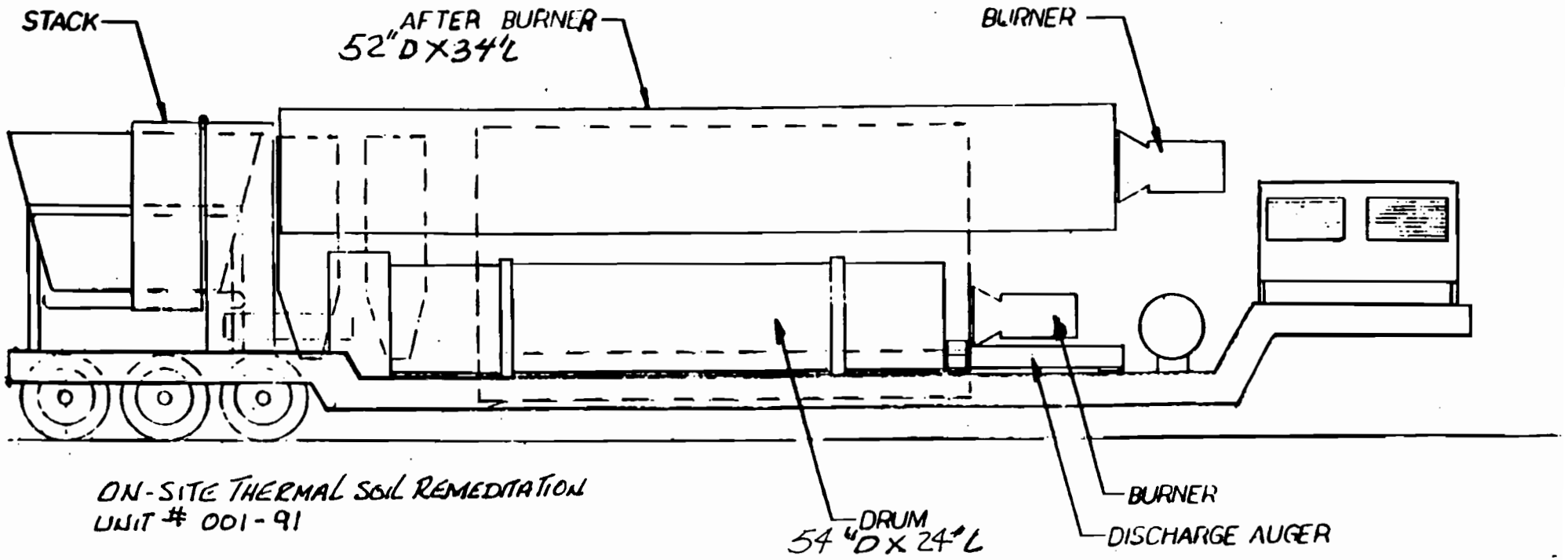
B. Macdonald

B. Macdonald, President

A. Ugelow, P.E.

cc: M. Hanks





ON-SITE THERMAL SOIL REMEDITATION
UNIT # 001-91

NO: 02302
NOTICE OF
APPLICATION

The Department of Environmental Regulation announces receipt of an application for permit from On Site Thermal Soil Remediation, Inc. to construct a mobile soil remediation unit that will evaporate and incinerate petroleum products (fuels and lubricants) from soils contaminated by leaking fuel tanks, spills, etc. This mobile unit may be operated in any county that this Notice appears in.

The application is being processed at the Department of Environmental Regulation, BAR, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m. - Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road
Tallahassee, FL
32399-2400

160 Governmental Center
Pensacola, FL 32501-5794

4520 Oak Fair Blvd.
Tampa, FL 33610-7347

2269 Bay Street
Fort Myers, FL 33901-2896

7825 Baymeadows Way
Suite B200
Jacksonville, FL
32256-7577

1900 S. Congress Avenue
Suite A
West Palm Beach, FL
33406

and County offices located at:

621 S. Andrew Avenue
Ft. Lauderdale, FL 33301

801 SW 3rd Avenue
2nd floor
Miami, FL 33130

421 West Church Street
Suite 412
Jacksonville, FL
32202-4111

1410 North 21st Street
Tampa, FL 33605

901 E. Evernia Street
West Palm Beach, FL
33402

315 Court Street
Clearwater, FL 34616

1301 Cattleman Road
Building B
Sarasota, FL 43232-6299

2002 E. Michigan Avenue
Orlando, FL 32806

PUBLISH: January 25, 1991

* NOTARIZED COPY & NEWSPAPER
INFORMATION TO FOLLOW

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

Willard

Attached is our proof of publication without any changes. This paper has the largest circulation in St. Lucie Co. The answer to your questions will follow soon.

Bill Macdonald

FORT PIERCE PORT ST. LUCIE Tribune
P.O. Box 69
Fort Pierce, St. Lucie County, Florida 34954-0069

STATE OF FLORIDA
COUNTY OF ST. LUCIE

Before the undersigned authority personally appeared David T. Rutledge or Kathleen K. LeClair, who on oath says that he/she is publisher, business manager of The Tribune, a daily newspaper published at Fort Pierce in St. Lucie County, Florida; that the attached copy of the advertisement, being a Notice of Application in the matter of Env. Reg. - On Site Thermal, Inc. was published in said newspaper in the issues of 1/25/91

Affiant further says that The Tribune is a newspaper published at Fort Pierce, in said St. Lucie County, Florida, and that the said newspaper has heretofore been continuously published in St. Lucie County, Florida, each day and has been entered as second class mail matter at the post office in Fort Pierce, in said St. Lucie County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement: and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and subscribed before me
This 25th day of January
A.D. 1991

Notary Public
State of Florida at Large
My Commission Expires
April 2 1994

(SEAL) Notary Public

NO: 02302
NOTICE OF APPLICATION

The Department of Environmental Regulation announces receipt of an application for permit from On Site Thermal Soil Remediation, Inc. to construct a mobile soil remediation unit that will evaporate and incinerate petroleum products (fuels and lubricants) from soils contaminated by leaking fuel tanks, spills, etc. This mobile unit may be operated in any county that this Notice appears in.

The application is being processed at the Department of Environmental Regulation, BAR, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m. - Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road
Tallahassee, FL 32399-2400

160 Governmental Center
Pensacola, FL 32501-5794

4520 Oak Fair Blvd.
Tampa, FL 33610-7347

2269 Bay Street
Fort Myers, FL 33901-2896

7825 Baymeadows Way
Suite B200
Jacksonville, FL 32256-7577

1900 S. Congress Avenue
Suite A
West Palm Beach, FL 33406

and County offices located at:

621 S. Andrew Avenue
Ft. Lauderdale, FL 33301

801 SW 3rd Avenue
2nd floor
Miami, FL 33130

421 West Church Street
Suite 412
Jacksonville, FL 32202-4111

1410 North 21st Street
Tampa, FL 33605

901 E. Evernia Street
West Palm Beach, FL 33402

315 Court Street
Clearwater, FL 34616

1301 Cattleman Road
Building B
Sarasota, FL 43232-6299

2002 E. Michigan Avenue
Orlando, FL 32806

PUBLISH: January 25, 1991

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:
Mr. William A. Macdonald, President
On Site Thermal Soil Remediation
3450 S.E. Dixie Highway
Stuart, FL 34997

4. Article Number
P 407 285 935

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee
X

6. Signature — Agent
X

7. Date of Delivery
12-24-90

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 407 852 935

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Mr. William A. Macdonald	
Street and No. On Site Thermal Soil 3450 S.E. Dixie Highway	
P.O., State and ZIP Code Stuart, FL 34997	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 12-21-90 Permit: AC 43-189664	

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

Florida Department of Environmental Regulation

Twin Towers Office Bldg. ● 2600 Blair Stone Road ● Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

December 20, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. William A. Macdonald, President
On Site Thermal Soil Remediation, Inc.
3450 S.E. Dixie Highway
Stuart, Florida 34997

Dear Mr. Macdonald:

Re: File No. AC 43-189664, 25 TPH SRU

The Department has made a preliminary review of your application for permit to construct a mobile 25 TPH soil remediation unit for operation throughout Florida. Before this application can be processed, we need the following information:

1. What is the total allowable volatile organic compounds (VOC) emissions being requested for this facility? The calculations should be based on the maximum annual operation hours (365.25 days/year), soil feed rate, VOC content of the soil, afterburner destruction efficiency, and fuel consumption of the associated equipment (truck hauling unit, payloader handling soil, generator, etc.). If total VOC emissions exceed 100 TPY, you may be subject to new source review for nonattainment area regulations.

2. Please provide a brochure or engineer specification/drawings of the proposed unit that shows the dimensions of the dryer, the air/cloth ratio (number of bags and total area) of the dust collector, and the dimensions or calculations of the residence time for the gas in the afterburner.

3. What is the theorical flue gas flow rate in units of dscfm corrected 50% excess air?

4. How will fugitive dust from handling the treated soil be controlled?

5. Will the unit use fuels other than propane (LPG or natural gas)?

Applicants for permits to construct soil remediation units are required to publish a Notice of Application on submittal of a complete application for permit to construct. Your Notice of Application is enclosed. Your application will be considered substantially complete on responding satisfactorily to the questions in this letter. You must publish the Notice in a newspaper having circulation in each county you intend to operate in and provide this Department with proof of each publication. You will also be required to publish a Notice of Intent to Issue in the same newspapers should the Department approve your application. Any construction permit issued will limit you to operating in these counties. To operate in any other county, you will have to satisfy the public notice requirements for that county and have your permit amended to authorize operation in that county. The public will have an opportunity to comment or petition for an administrative hearing in response to any public notice for your unit.

We will resume processing your application after we receive the requested information. If you have any questions on this matter, please write to me or call Willard Hanks at 904-488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/WH/plm

c: District Air Program Administrators
County Air Program Administrators
Albert Ugelow, P.E.

Notice of Application

The Department of Environmental Regulation announces receipt of an application for permit from On Site Thermal Soil Remediation, Inc. to construct a mobile soil remediation unit that will evaporate and incinerate petroleum products (fuels and lubicants) from soils contaminated by leaking fuel tanks, spills, etc. This mobile unit may be operated in any county that this Notice appears in.

The application is being processed at the Department of Environmental Regulation, BAR, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m. - Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, FL 32399-2400
160 Governmental Center, Pensacola, FL 32501-5794
4520 Oak Fair Blvd., Tampa, FL 33610-7347
2269 Bay Street, Fort Myers, FL 33901-2896
7825 Baymeadows Way, Suite B200, Jacksonville, FL 32256-7577
1900 S. Congress Ave., Suite A, West Palm Beach, FL 33406

and County offices located at:

621 S. Andrew Ave., Ft. Lauderdale, FL 33301
801 S.W. 3rd Avenue, 2nd Floor, Miami, FL 33130
421 West Church St., Suite 412, Jacksonville, FL 32202-4111
1410 North 21st Street, Tampa, FL 33605
901 E. Evernia Street, West Palm Beach, FL 33402
315 Court Street, Clearwater, FL 34616
1301 Cattleman Road, Bldg. B, Sarasota, FL 43232-6299
2002 E. Michigan Avenue, Orlando, FL 32806

ON-SITE
THERMAL SOIL REMEDIATION, Inc.
3450 S.E. Dixie Hwy.
Stuart, FL 34997
407-220-3421

November 13, 1990

Air Regulation
~~Remediation~~

1031

Mr. Willard Hanks
Florida Dept. of Environmental Reg.
Twin Towers Office Bldg.
2600 Blair Stone Rd.
Tallahassee, Fl. 32299-2400

Dear Mr. Hanks,

Enclosed is our application and permit fee of $1,000 to construct a Mobil Soil Remediation Unit for use throughout the State of Florida. The unit consists of a rotary drier, cyclones, baghouse and afterburner designed for a 25 ton/hr destruction rate of petroleum contamination in soils.

Please call me when any additional information is needed for your preliminary review.

Respectfully,

Bill Macdonald

Bill Macdonald
President

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

$1,000 pd.
11-26-90
Rcpt. #15121

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

AC 43-149664

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: _____ [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: ON SITE THERMAL SOIL REMEDIATION INC. COUNTY: MOBIL UNIT

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) ROTARY DRIER WITH BAGHOUSE & AFTERBURNER

SOURCE LOCATION: Street MOBIL UNIT City _____

UTM: East _____ North _____

Latitude ____° ____' ____"N Longitude ____° ____' ____"W

APPLICANT NAME AND TITLE: WILLIAM A.MACDONALD / PRESIDENT

APPLICANT ADDRESS: 3450 S.E. DIXIE HWY, STUART, FL 34997

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of ON SITE THERMAL SOIL REMEDIATION INC.

I certify that the statements made in this application for a MOBIL SOIL THERMAL REMEDIATION UNIT permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: William A. Macdonald

William A. Macdonald - President
Name and Title (Please Type)

Date: 10-31-90 Telephone No. (407)220-3421

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, th

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed _____

ALBERT UGELOW, P.E.

Name (Please Type)

ON-SITE THERMAL SOIL REMEDIATION INC.

Company Name (Please Type)

c/o APPLICANT AT APPLICANTS ADDRESS

Mailing Address (Please Type)

Florida Registration No. 31840 Date: Nov 2, 1990 Telephone No. (407) 220-3421

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

THIS UNIT HAS BEEN DESIGNED FOR THE THERMAL DECONTAMINATION OF PETROLEUM CONTAMINATED SOIL. EVAPORATION OF VOC'S WILL TAKE PLACE IN A ROTARY DRIER AT 400°-700°F. PARTICULATES IN THE DRIER EXIT GAS STREAM WILL BE CONTROLLED BY CYCLONES & A BAGHOUSE. VOC DESTRUCTION TAKES PLACE IN A AFTERBURNER AT 1600° FOR 1 SEC.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction JAN 30,1991 Completion of Construction JAN 30,1992

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

CYCLONES 6,000.00

BAGHOUSE 130,000.00

AFTERBURNER 95,000.00

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

NONE

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
PETROLEUM	PARTICULATE	100%	50,000	DWG.#1491
CONTAMINATED	VOC	VARIABLE		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 50,000 lbs/hr.

2. Product Weight (lbs/hr): 50,000 OR LESS (WET)

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	uncontrolled Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/~~xx~~ hr	T/yr	
PARTICULATE	≤6.051	26.43	.08GR/DSCF		142.87	624.06	
CO	≤1.945	8.50			1.33	5.81	
NOx	≤7.780	33.98			5.33	23.28	
SO2	≤10.01	43.72			10.01	43.72	
VOC	≤22.89	99.98			986.41 lbs/hr		

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? YES

   a. If yes, has "offset" been applied? NO

   b. If yes, has "Lowest Achievable Emission Rate" been applied? NO

   c. If yes, list non-attainment pollutants. SO2-OZONE-PARTICULATE

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. NO

3. Does the State "Prevention of Significant Deterioriation" (PSD) requirement apply to this source? If yes, see Sections VI and VII. NO

4. Do "Standards of Performance for New Stationery Sources" (NSPS) apply to this source? NO

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? NO

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? YES

   a. If yes, for what pollutants? PARTICULATES

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

THE STANDARD FOR PARTICULATES OF .08 GR/DSCF CORRECTED TO 50% EXCESS AIR WILL BE COMPLIED WITH.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
PETROLEUM	PARTICULATE	100%	50,000	DWG.#1491
CONTAMINATED	VOC	VARIABLE		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 50,000 lbs/hr.

2. Product Weight (lbs/hr): 50,000 OR LESS (WET)

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	uncontrolled Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/~~xx~~ hr	T/yr	
PARTICULATE	≤6.051	26.43	.08GR/DSCF		142.87	624.06	
CO	≤1.945	8.50			1.33	5.81	
NOx	≤7.780	33.98			5.33	23.28	
SO2	≤10.01	43.72			10.01	43.72	
VOC	≤22.89	99.98			986.41	lbs/hr	

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
ADM MODEL RS 15				
ADM CYCLONES	PARTICULATE	55%+	NA	MANUFACTURER
ADM BAGHOUSE	PARTICULATE	99.7%	0-1000 MICRONS	"
ADM AFTERBURNER	VOC	99%	NA	"

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	15 TON avg/hr	25 TON max./hr	
PROPANE (DRIER)	125.10 GAL/HR	208.50 GAL/HR	18.96 MMBTU/HR
PROPANE (AFTERBURNER)	118.50 GAL/HR	198.0 GAL/HR	17.9 MMBTU/HR

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: 0.2% Percent Ash: -0-

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb 91,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average NA Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

DUST FROM BAGHOUSE IS BLENDED WITH 700° DRIER SOIL DISCHARGE TO PROVIDE SECONDARY EVAPORATION OF VOC'S THAT MAY BE ENTRAINED IN PARTICULATES.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 22' ft. Stack Diameter: 3'DIAM ft.

Gas Flow Rate: 31,000 AVG AT 1600°F ACFM DSCFM Gas Exit Temperature: 1600 °F.

Water Vapor Content: VARIABLE % Velocity: 76.0 FPS

SECTION IV: INCINERATOR INFORMATION

NOT APPLICABLE

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]

2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.

3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).

4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)

5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).

6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.

7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).

8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY NOT APPLICABLE

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data NOT APPLICABLE

1. _____ no. sites _____ TSP _____ ( ) SO_2* _____ Wind spd/dir

Period of Monitoring ____/____/____ to ____/____/____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____/_____/_____ to _____/_____/_____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

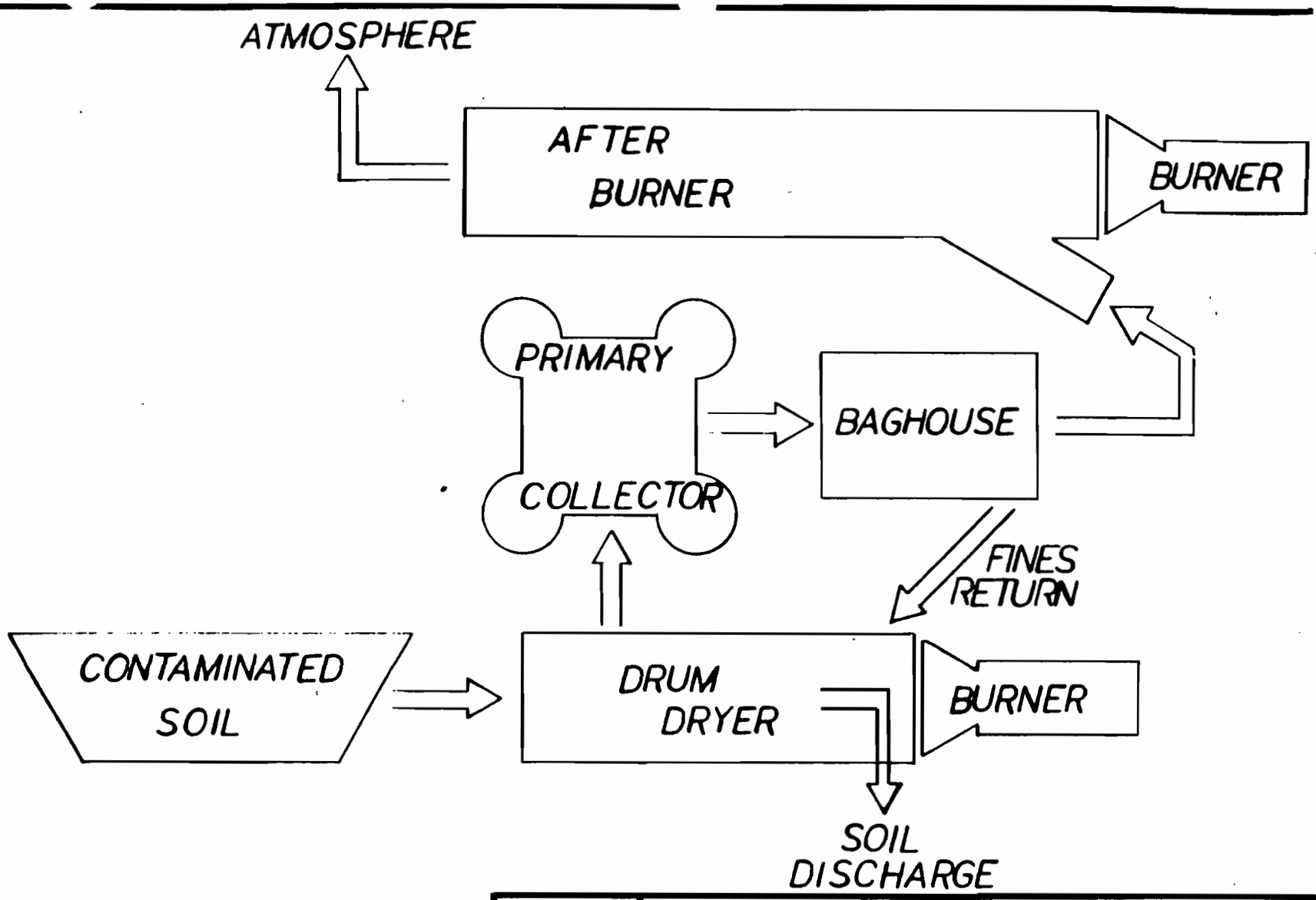
E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

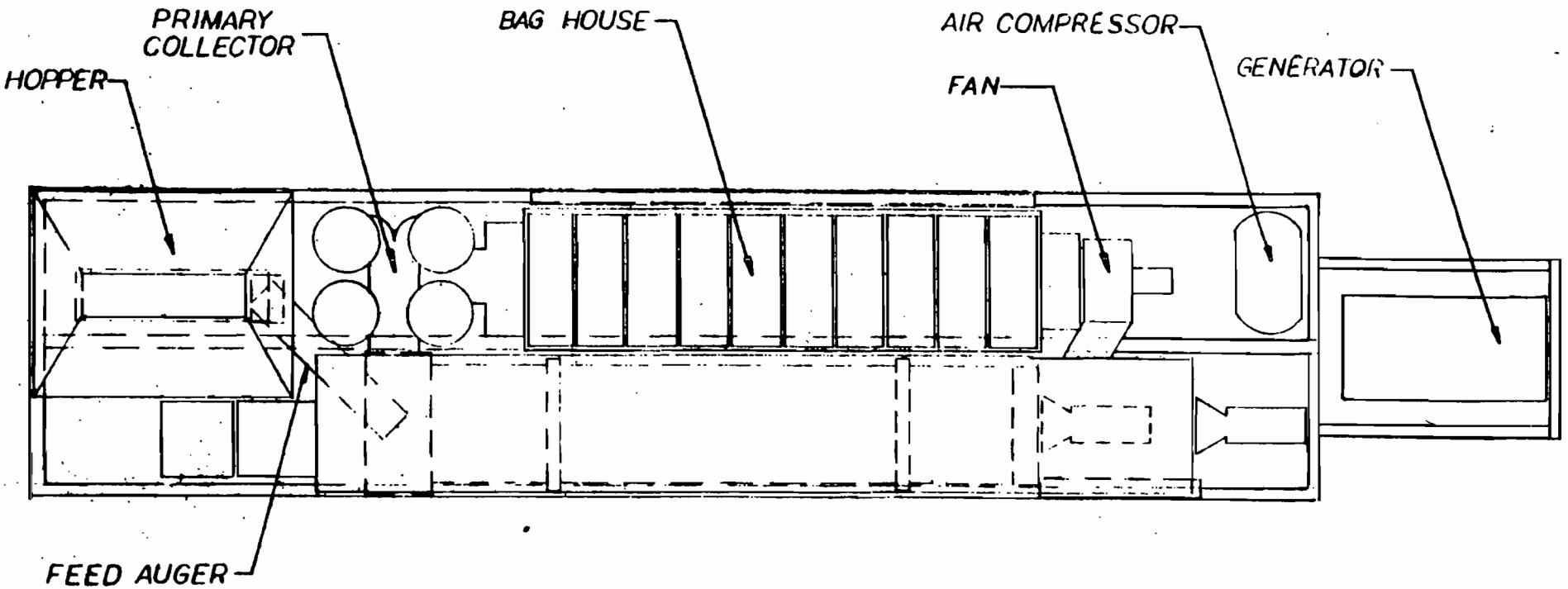


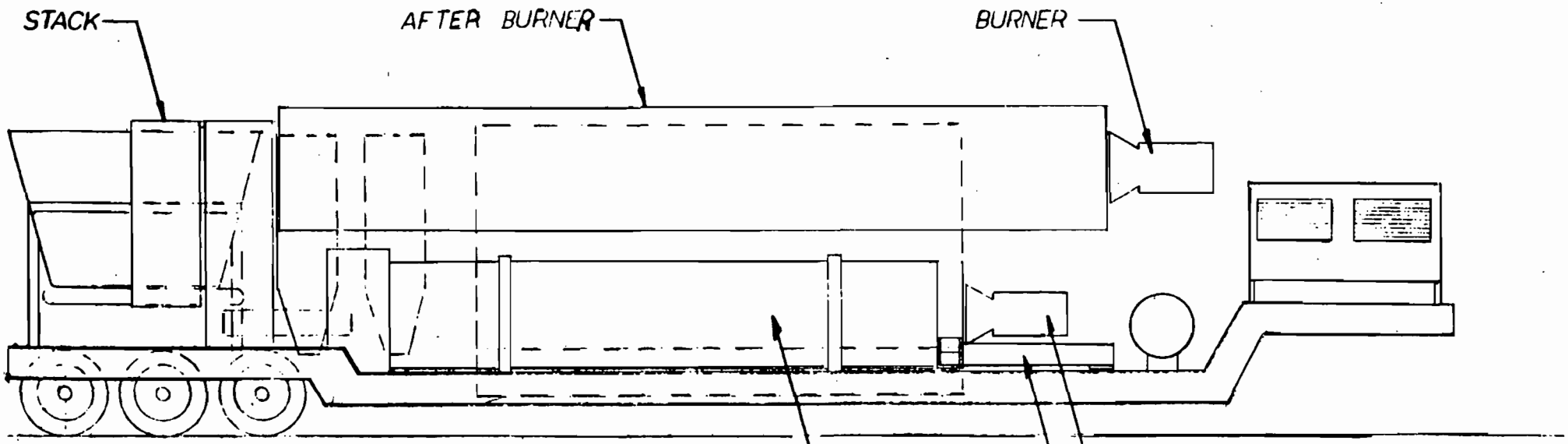
TOLERANCES (EXCEPT AS NOTED)	REVISIONS		
DECIMAL ±	NO.	DATE	BY
FRACTIONAL ±	1		
ANGULAR ±	2		
	3		
	4		
	5		

CONTAMINATED SOIL PLANT FLOW DIAGRAM

ADM INC

DRAWN BY RJH	SCALE	MATERIAL
CHK'D	DATE 7-13-90	DRAWING NO. 1491
TRACED	APP'D	





ON-SITE THERMAL SOIL REMEDIATION
UNIT # 001-91

MOBILE RS15 UNIT

SCOPE:

The ADM MOBILE RS15 UNIT is targeted for remediating soils contaminated by volatile organic compounds (VOCs such as gasoline and oil), rather than trying to destroy hazardous constituents in materials that have low heating values (such as soils),the RS15 only evaporates the organic compounds. After the organic compounds are separated from the soil, then the VOCs are destroyed through combustion.

PROCESS DESCRIPTION:

Low temperature thermal treatment is achieved by destroying the contaminated portions of the soil that have a low heating value. In this process, material is loaded into a 20 ton bin then conveyed by a belt conveyor into the drier drum. The drier drum is a counter flow type that is capable of achieving 700 degrees fahrenheit soil temperature. The material is then conveyed for stockpiling. Off-gas from the drier is then conditioned thru a cyclone-particulate removal, a baghouse-particulate removal. an afterburner-voc combustion,

09-17-1990
JTD

HAUCK AGGREGATE DRYER HEAT BALANCE

Customer :MAC
Salesman :JTD

Aggregate	[tph]	:	25
Ambient Temperature	[F]	:	60
Plant Altitude [ft]		:	650
Aggregate moisture		:	0.100
Material Inlet Temp	[F]	:	60
Material Outlet Temp	[F]	:	700
Excess air rate		:	0.500
Leakage rate		:	0.100
Stack temperature	[F]	:	400
Drum loss		:	0.100

HEAT BALANCE

Aggregate	700 F	25.00 tph	6,400,000 Btu/Hr
Moisture [0.10]	400 F	2.78 tph	6,732,225 Btu/Hr
Products of Comb	400 F		3,099,188 Btu/Hr
Drum Loss [0.10]			1,896,802 Btu/Hr
Excess Air [0.50]	400 F		560,720 Btu/Hr
Leakage [0.10]	400 F		279,091 Btu/Hr
Total Heat Required		25.00 tph	18,968,020 Btu/Hr

AIR BALANCE

Products of Comb	400 F	5,487 acfm
Steam	400 F	3,294 acfm
Excess Air [0.50]	400 F	2,523 acfm
Leakage [0.10]	400 F	1,256 acfm
Total Exhaust Flow Required		12,560 acfm

LP [Gross 91,000 Btu/gal] 8.34 gal/ton

"THE AFFORDABLE MANUFACTURER"

ASPHALT DRUM MIX PLANTS

30-60-100-150-220 TONS PER HOUR

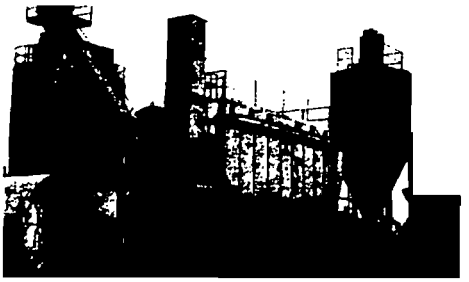
This equipment has a world-wide reputation for quality, cost effective products and services. ADM has manufactured over 200 plants in 15 years, following a basic approach of simplicity without sacrifice.

SAND HEATERS

Sand heaters have enabled redi-mix producers to deliver concrete to customers throughout the winter. Heating the sand and the water, produces a more consistent product at a substantial cost savings.

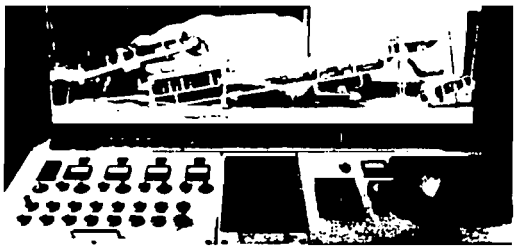
POLLUTION CONTROL

ADM control equipment has proven results and reliable back-up. Our products with capabilities up to 40,000 CFM include cyclones, baghouses, venturi-scrubbers and afterburners.



DRIERS/RELATED PRODUCTS

Our leadership in small drum mix plants has given us the opportunity to manufacture driers and other rotary driven equipment for many applications. We also build many types of storage silos, heating tanks, hoppers, conveyors, and control systems.



ADM ASPHALT DRUM MIXERS, INC.

ADM PARK WAY — HUNTERTOWN, INDIANA, USA 46748
PH 219-637-5729 FAX 219-637-3164

AFTERBURNER

AIR AT ACTUAL CONDITIONS	12,560 ACFM
TEMPERATURE F.	400 DEG. F.
PROCESS TONNAGE	25 TPH

OUTLET AIR TEMPERATURE:

TEMPERATURE F.	1,600 DEG. F.

AIR BALANCE

INLET AIR STD. CONDITIONS	7,740 SCFM
BURNER AIR REQD.	2,941 SCFM
TOTAL AIR STD. CONDITIONS	10,682 SCFM
EXHAUST FLOW AT ACTUAL CONDITIONS	41,518 ACFM

HEAT BALANCE

BTU REQD. FOR PROCESS AIR	13,027,203 Btu/Hr
BTU REQD. FOR BURNER AIR	4,950,337 Btu/Hr
TOTAL BTU REQD.	17,977,540 Btu/Hr

FUEL USAGE

LP(GROSS 91,000 Btu/gal)	198 Gal/Hr
LP USAGE PER PROCESS RATE	7.9 Gal/Ton
NATURAL GAS(GROSS 1000 Btu/Cf)	17,978 Cf/Hr
NATURAL GAS USAGE PER PROCESS RATE	719 Cf/Ton

SOIL UNIT EMMISSION DATA

PROCESS CONDITIONS	
RATE	25.000 TPH
MOISTURE	10.000 %
SOIL HYDROCARBON CONTENT	2.000 %
DRIER FUEL CONSUMPTION	208.500 LP GAL/HR
AFTERBURNER FUEL CONSUMPTION	198.000 LP GAL/HR
OPERATING DATA	
HOURS	24 HRS.
DAYS	7 DAYS
WEEKS	52 WEEKS
YEAR	8,736 HRS/YR
EMMISSION REQUIREMENTS	
MAXIMUM PARTICULATE(REF. AP-42)	6.051 LB/HR
VOC EFFLUENT	100 TON/YR
DRIER EMMISSION FACTOR	
PARTICULATE EMMISSION FROM DRIER (REF. AP-42)	142.5 LB/HR
VOC EMMISSIONS FROM SOIL	1,000.000 LB/HR
CONVERSION FROM LB. TO GAL.	136.986 GAL/HR
PARTICULATE	0.274 LB/HR
SULPHUR DIOXIDE	10.000 LB/HR
NITROGEN OXIDE	2.740 LB/HR
CARBON MONOXIDE	0.685 LB/HR
HYDROCARBONS(VOC)	986.301 LB/HR
BURNER EMMISSIONS	
PARTICULATE	0.092 LB/HR
SULPHUR DIOXIDE	0.008 LB/HR
NITROGEN OXIDE	2.585 LB/HR
CARBON MONOXIDE	0.646 LB/HR
HYDROCARBONS(VOC)	0.108 LB/HR
UNCONTROLLED EMMISSIONS	
TOTAL PARTICULATE	142.87 LB/HR
TOTAL NON-PARTICULATE	
SULPHUR DIOXIDE	10.01 LB/HR
NITROGEN OXIDE	5.33 LB/HR
CARBON MONOXIDE	1.33 LB/HR
HYDROCARBONS(VOC)	986.41 LB/HR
CONTROL UNIT	
BURNER EMMISSIONS	
PARTICULATE	0.087 LB/HR
SULPHUR DIOXIDE	0.007 LB/HR
NITROGEN OXIDE	2.455 LB/HR

SOIL UNIT EMMISSION DATA

CARBON MONOXIDE		0.614 LB/HR
HYDROCARBONS(VOC)		0.103 LB/HR
PARTICULATE EMMISSION CONTROLLED		
PERMISSABLE PARTICULATE		6.051 LB/HR
PARTICULATE FROM BAGHOUSE		5.963 LB/HR
PARTICULATE FROM AFTERBURNER		0.087 LB/HR
TOTAL PARTICULATE		6.051 LB/HR
BAGHOUSE EFFICIENCY REQ.		95.83%
VOC EMMISSION CONTROLLED		
PERMISSABLE VOC		22.894 LB/HR
VOC EMMITTED		22.894 LB/HR
AFTERBURNER EFFICIENCY REQ.		97.68%
OTHER EMMISSIONS CONTROLLED		
SULPHUR DIOXIDE	LESS THEN	10.015 LB/HR
NITROGEN OXIDE	LESS THEN	7.780 LB/HR
CARBON MONOXIDE	LESS THEN	1.945 LB/HR

ADM ASPHALT DRUM MIXERS, INC.

BAGHOUSE

GENERAL DESCRIPTION

The ADM baghouse is an automatic continuous dust collector utilizing a Venturi type orifice for compressed air cleaning of collected particulates from the fabric filter. The ADM baghouse is capable of collecting dust particles from the air streams at virtually 100% efficiency, and at temperatures up to 550°F.

STATIONARY UNITS

Stationary dust collection units are shipped in two pieces: housing and clean air plenum with filter bags installed; and hopper and legs shipped as an all welded single assembly with screw conveyor installed. All valve, tubing and pneumatic lines are installed and shipped attached, but when that is not feasible all components are carefully banded and placed with the carrier separately. If a ladder and handrail are required, they are shipped loose with the hopper. They have been pre-assembled and fitted with plenum but are now disassembled for packing.

PORTABLE UNITS

Portable collection units are supplied ready to operate - with fan, damper, hinged stack, compresson, return fines system, screw conveyors, motors and control panel - all installed and ready to roll on the highway, with all necessary trailer running gear. The unique hinged inlet provides entry into the collection chamber. This chamber reduces the velocity of dust-laden particles, decreasing the possibility of bag abrasion and acts as a classifier often eliminating the need for a cyclone.

OPERATION

FILTERING

Dust laden air is drawn or pushed into the hopper by a fan or blower. Air is pulled through the filter bags, which trap and collect the dust. Clean air is vented from the plenum of the unit and exhausted.

1 ADM PARKWAY — HUNTERTOWN, INDIANA 46748 — PH. 219-637-5729 — FAX 219-637-3164

BACKWASH SYSTEM

As dust collects on the filter bags, they become more and more dense, and less and less permeable. Dust is removed from the bags by injecting a short burst of high pressure compressed air into the top of the bag which overcomes pressure drop across the bags and blows the dust loose. This can be said to be aero-dynamic valving and cleaning of the bags. This is done automatically by a self-contained solid state timer. The timer controls both the frequency and duration of the cleaning pulses.

PRESSURE DROP

The pressure drop across the bags is measured as the difference between the static pressure on the dirty air side and the clean air side. All ADM units are shipped with gauges so that pressure drop can be continually monitered. As static pressure drop increases, the bags are becoming coated. Since the cycling operation of the backwash sytem alternates with groups of bags, instead of all the bags cleaned at once, pressure drop should be relatively constant. Our dust collectors work best at low pressure drops since the least amount of fan power is required at that level. As a reference, up to 3" W.G. may be considered low pressure. A unit operating at 7" W.G. or more is operating at a high pressure drop and may be reason enough for alarm. Factors which may have an effect on the pressure drop are: filter rate, grain loading, pulsing (cleaning) frequency, backwash air pressure and dust type. The collector pressure drop can be influenced by changing any and all of the above.

PARTICULATE REMOVEL

Our collectors incorporate a screw conveyor to bring the particulate to a central location for removal. In portable units two or three hopper screws are used along the length of the unit to bring dust to an internal crossing screw conveyor, which transports it to an external pick-up point.

RETURN FINES SYSTEM

The collector includes a screw conveyor(s) to collect the dust to a single exit point. Dust is discharged through a properly sized air lock. Dust passing through the rotary valve is delivered into an adaptor to the pneumatic conveyor, the blower system, or optional screw conveyor, then removes it into the point of discharge.

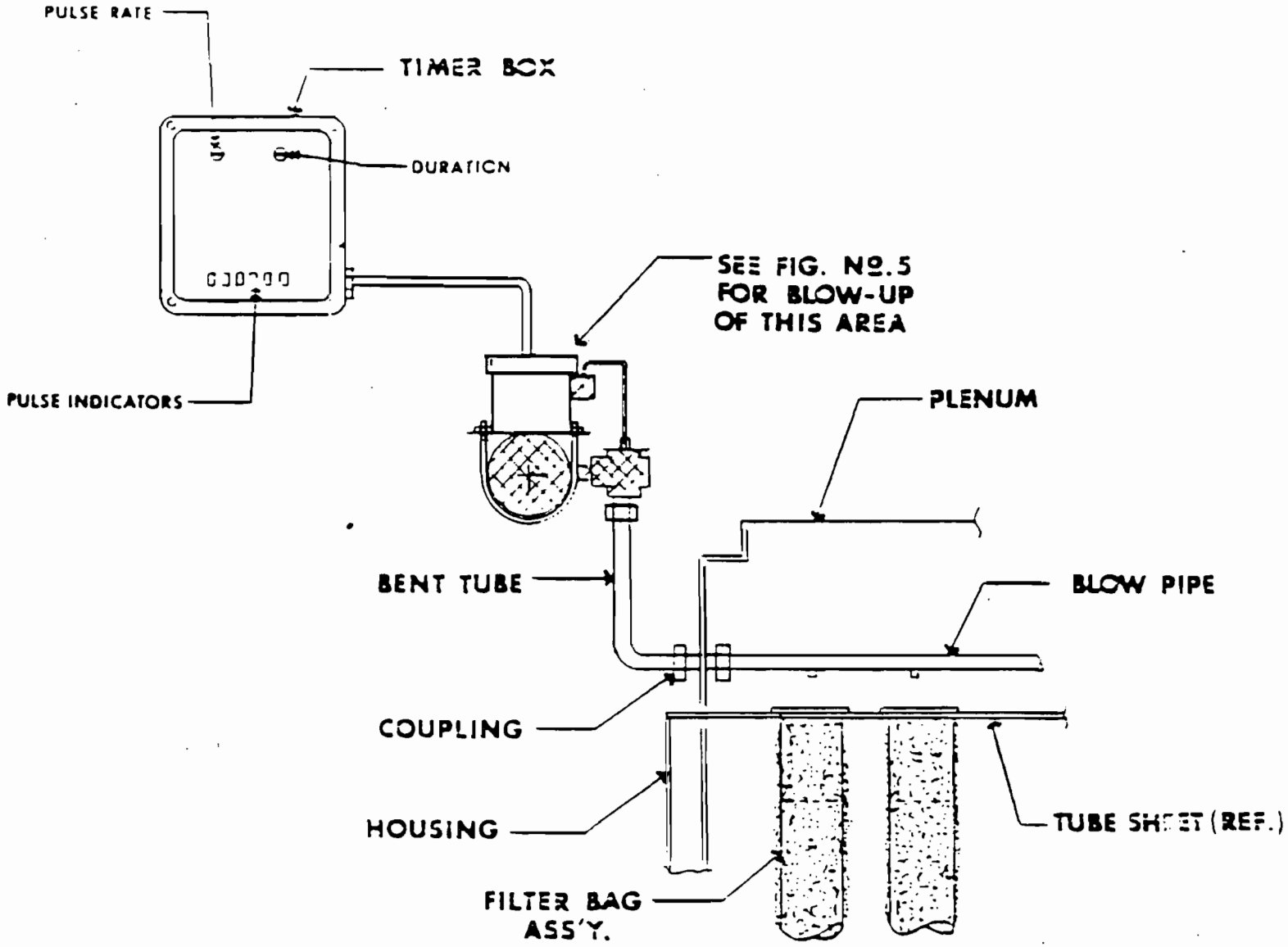
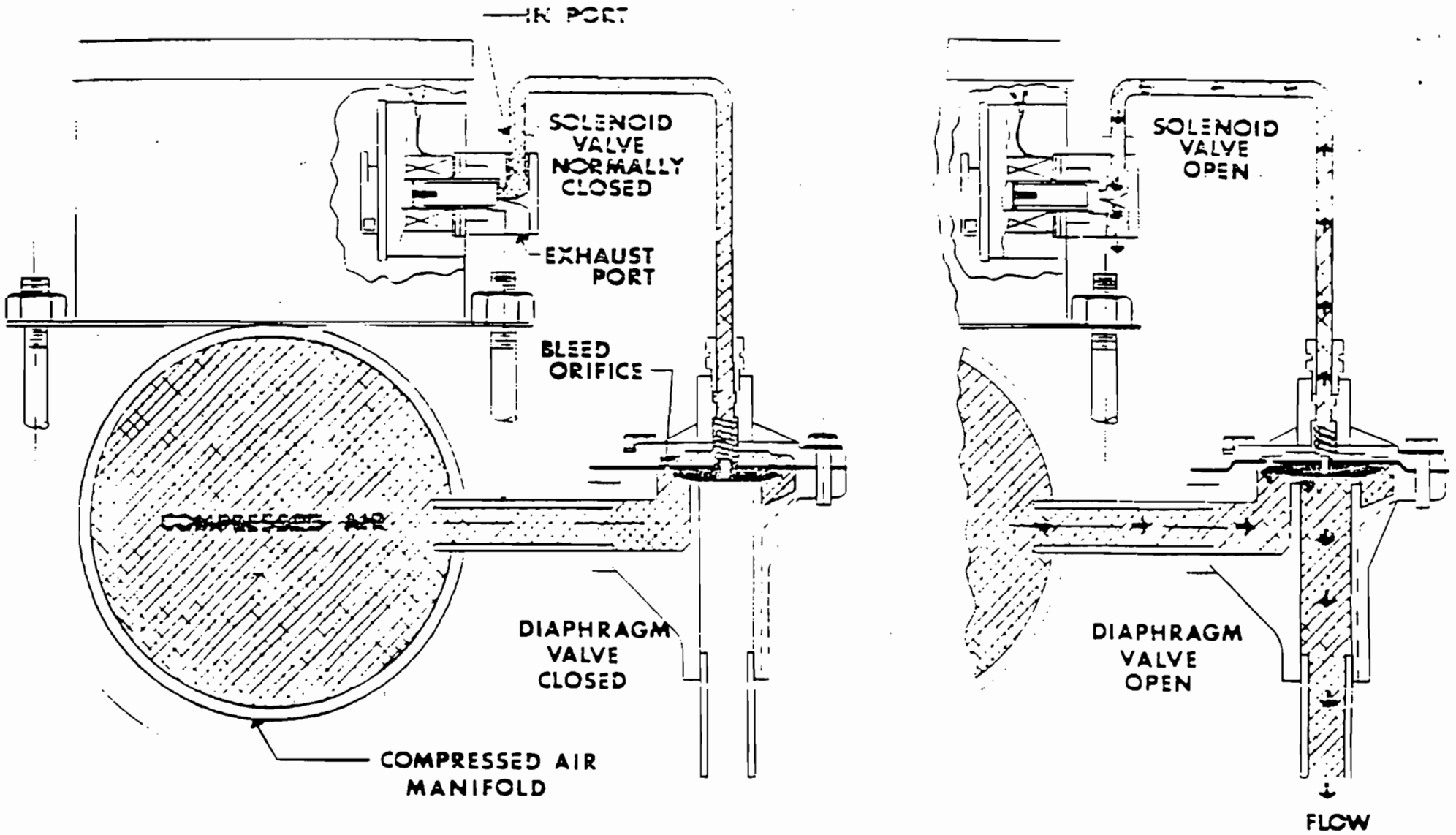


FIG-3

GENERAL ARRANGEMENT

BACKWASH SYSTEM DE-ENERGIZED



SOLENOID DE-ENERGIZED

SOLENOID ENERGIZED

FIG~5

OPERATION OF BACKWASHING VALVES

ADM ASPHALT DRUM MIXERS, INC.

BENEFITS OF THE ADM DUST COLLECTOR

ADM manufactures a complete line of reverse pulse baghouse collectors. We offer more **user** benefits than other designs available. Some of our features/benefits are:

1. Reverse pulse cleaning of the bags offers the most efficient method of cleaning. Thus, pressure drop across the bags is less on the reverse pulse design which requires less horsepower and saves considerable money.

2. Felted bags are exclusively used because they clean better and require a buildup of a "dust cake." Thus, felted bags have a lower pressure drop in pulse jet dust collectors which saves horsepower and money.

3. We use 4½" diameter bags. 4½" diameter bags clean better and require less compressed air for cleaning than 5" or 6" bags. The bags clean better because the reverse pulse causes a greater amount of flexing and does not decrease bag life, but it does clean the bags better.

4. Less compressed air is used. A 4½" diameter bag has almost one half the volume of the same length 6" diameter bag. Although more 4½" diameter bags are required for the same air-to-cloth ratio, the compressed air requirements are less because the total volume of the bags (and hence the compressed air requirements) are less - about one third less. Compressed air is expensive, so the savings are significant.

5. We offer a true top bag removal design. This allows the worker to change the bags in a clean atmosphere and at the same time allows him a convenient spot to find any potential leaks. Large leaks are clearly visible and small leaks can be found by the use of illuminous powder and a black light.

6. The bag diameter is 4½" and the hole through which it is placed is five inches. When there is a hole in the bag, the bag expands - it does **not** become larger than the hole. Therefore it can still be removed from the top making our unit a true top bag removal type unit.

1 ADM PARKWAY — HUNTERTOWN, INDIANA 46748 — PH. 219-637-5729 — FAX 219-637-3164

7. Our bags are installed with a "twist lock" feature. There are no nuts and bolts that can rust or seize or break.

8. Our bags are clamped to the cage and venturi. The groove in the cage and venturi ensures solid attachment of the cage, bag and venturi, even with a light clamping force. "Snap lock" bags can too easily be dropped into the house and snagged by the airlock or screw conveyor.

9. Our venturi is sealed to the tubesheet with a special molded gasket, to avoid any leakage at this point. Our molded design ensures far better sealing than flat gaskets.

10. Our blowpipes are extremely easy to remove by sliding a pin out, undoing the coupling at the other end and sliding the blowpipe out.

11. Our diaphragm valves are piped to the top of the unit, so no external catwalk is required - the valves can be worked on from the top of the unit.

12. Our solenoid valves are premounted in a "Manifold" that has a bolted and gasketed cover, to keep them out of the weather. These solenoids are prewired to a terminal strip at either end of the "manifold." The solenoids have been prepiped to the diaphragm valves, and the assembly has been pretested before it leaves the factory. This saves you the time and considerable expense of mounting the diaphragm valves and solenoid valves and hooking them together.

13. All units are shipped with **bags, cages, venturis and blowpipes installed.** Others may claim that they ship their units with bags installed; however, very few ship the units as completely assembled as we do. This saves you **many, many** hours of installation labor.

14. Our tubesheet is of all welded construction. There are no bolted or caulked seams in our tubesheet. The tubesheet is continuously welded to the plenum, so there is no chance of dust leakage through a bolted or caulked seam.

15. On larger units, we use all welded construction on the dirty air side except where the hopper bolts to the house. Thus, there are no bolted or caulked seams that can leak or work open.

16. Top covers are easy to remove for bag inspection or replacement - each cover is held in place with four bolts. Covers are gasketed to ensure sealing.

17. We use a solid state timer that is extremely reliable and provides adjustable pulse rate and pulse duration, for the most efficient and economical cleaning cycle. For coal fired boilers and FGD systems, we offer a micor-processor based programmable computer control system to provide complete process control and fail safe protection in these high temperature applications.

CYCLONES

COLLECTION MECHANISM

Cyclones are structures without moving parts that separate particulate matter from a gas stream by transforming the inlet gas stream into a confined vortex. The mechanism involved in cyclones is the continuous use of inertia to produce a tangential motion on the particles towards the collector wall. When the particles enter the boundary layer close to the cyclone wall, they lose kinetic energy by viscous shear and mechanical friction. Two opposing forces are involved: an outward centrifugal force imparted by the rotation of the gas stream and an inward drag force which is a function of the density, the diameter, the shape, etc., of the particles themselves. Any particles for which the centrifugal forces is greater than the drag force will reach the wall and can be ultimately collected.

A vortex arrester, which is nothing more than a hopper, is built at the bottom of every cyclone. As the gas is spinning, observe that the gas stream will still reverse its direction and start spiraling up the center at the natural length of the cyclone, which depends on the physical dimensions of the unit. If the cyclone is properly designed, the vortex changes direction right at the bottom of the conical section. The sudden absence of the confining wall allows the particles falling down the wall to be thrown into the vortex arrester (collection hopper). That hopper must be deep enough, or emptied frequently (if not continually), to keep the dust level low enough so there will essentially be only laminar motion in the gas above it in order to prevent reentrainment of the collect dust.

CONSTRUCTION

Cyclones are relatively inexpensive. They can be constructed of any material which will meet the temperature and pressure requirements and the corrosion potential of the carrier gas stream. Cyclones can be designed to handle any required gas volume and dust loading. For high dust loadings, a high efficiency cyclone, i.e., one with a smaller body diameter and a longer taper is normally selected. A multiple set of cyclones operating in parallel may be needed to handle large gas rates. Such units are much more efficient than one monstrous cyclone because the efficiency of collection of the smaller particles decreases as the body diameter increases or as the body length becomes shorter. To promote increased efficiency, especially for the collection of the smaller sized particles, a small diameter, long taper cyclone should be used.

LIMITATIONS

Cyclones are normally used as a primary collector in addition to a more sophisticated type of pollution device. Although the simplest type of control and widely used, it is very seldom used as the only device.

ADM ASPHALT DRUM MIXERS, INC.

AFTERBURNER

GENERAL

Afterburners are devices in which the contaminant-laden air stream is passed over or through a burner flame into a residence chamber where the contaminants are oxidized, predominantly to carbon dioxide and water. It is a feature of these devices that the combustible material is raised above its autoignition temperature and held there long enough for complete oxidation to occur.

Thermal oxidation has many advantages. Such equipment will usually not become obsolete when changes in air pollution regulations require increases in efficiency. The performance of afterburners can be relied upon to remain uniform throughout the life of the equipment provided that satisfactory maintenance schedules are followed. Afterburners are relatively simple and economic to install and operate. Incorporation of thermal incinerators into process equipment quite often is possible because of the simple design of the afterburner. This is especially true whenever the process emissions are produced at a single point in a relatively concentrated stream and when some nearby source is available which can receive the high energy level of available heat in the combustion gas.

The disadvantages of an afterburner revolve about the necessity for high temperature operation (up to 1800°F) and the requirement for relatively large amounts of supplementary fuel unless heat recovery is utilized.

The temperature in the combustor varies due to changes in the mixing efficiency, residence time, concentration and type of pollutants (especially at lower temperatures), type of burner and response of the temperature-measuring device. The instrumentation uses quick response thermal sensors. At 1100-1250°F, thermal oxidation efficiencies of 75-85% may be expected. At 1150-1250°F, the combustion efficiency can approach 90%. Between 1200-1400°F the efficiency of combustion usually ranges from 90 to greater than 99%.

1 ADM PARKWAY — HUNTERTOWN, INDIANA 46748 — PH. 219-637-5729 — FAX 219-637-3164

SYSTEM CONFIGURATION

The base systems proposed have not heat recovery. A Hauck Baffle burner is used to provide the necessary fuel to raise the off gas temperature to 1400-1600°F. Upon establishing stable combustion in the burner, secondary inlet ports provide for off gas entry.

The design provides good mixing of the products of combustion with dryer off gases. After the mixing section, the POC - off gas mixture enters the residence chamber, which is appropriately sized to provide the desired residence time.

The temperature within the incineration chamber is maintained via a temperature controller which modulates the fuel supply valve.

SCOPE OF SUPPLY

The system proposed is intended to be a complete operation afterburner system. Our scope of supply includes:

1. Carbon steel residence chamber lined with 4" thick ceramic, 8# density fiber insulation. The ceramic fiber will have a nominal rating of 2300°F.
2. Carbon steel combustion chamber lined with castable and refractories.
3. Burner for oil firing and all safety controls including flame failure system.
4. Heavy wide flange beam frame.
5. Temperature readouts with multiple sensors.
6. Stainless steel stack with test ports.

OPTIONS

1. Portability package.
2. Natural gas and propane burner options. ✳
3. Carbon monoxide monitoring device.

On-Site Thermal Soil Remediation, Inc.

00240 091

63-512/660

11/16 19 95

PAY TO THE ORDER OF Florida Dept. of Environmental Regulation $ 1,000.00/100

THE SUM 1000 DOLS 00 CTS DOLLARS

FIRST UNION

First Union National Bank of Florida
Port Salerno, FL 34997-9999

FOR App Fee / Mobil Soil Remediation Unit

[redacted]

John Worrell